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ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS, AND PLACES OF GROWTH.

BY

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THE FIGURES BY

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> "...... quos ipsa volentia rura
> Sponte tulere sua ...." Virgil.

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ENGLISH BOTANY.

Class IV. TETRANDRIA.

Order I. MONOGYNIA.

Genus LXVIII. DIPSACUS. *Teasel.*

Nat. Order. Dipsaceæ.

Gen. Char. *Involucre* of many leaves. *Receptacle* chaffy. *Calyx* superior, double, the external minute, the internal entire.

Rigid, biennial, herbaceous plants, rough with bristles, the leaves opposite. Flowers in terminal heads, which are so condensed as to resemble compound flowers, the bracteæ becoming the leaves of the involucre and scales of the receptacle. The double calyx, hardly worthy the name, is peculiar in its structure; the outer part forms a margin, and the inner a crown to the seed. A somewhat similar one is found in the following genus, where the inner part has long teeth, and forms a passage to the pappus of syngenesious flowers.

The species seldom grow in situations to be injurious to the farmer. One of them is used in dressing cloth to raise the nap: the other species appear to be useless.

DIPSACUS Fullonum. *Fuller's Teasel.* Tab. **194**.

Leaves connected at the base. Scales of the receptacle broad, hooked. Involucre spreading.

Dipsacus Fullonum, *E. B.* 2080. *Smith* I. 192. *Lindley* 139. *Hooker* 59. *ed.* 2. 62.

Hudson mentions this plant as growing about hedges. In the clothing counties, where it is cultivated for use, it may escape from the fields. There is much doubt concerning the value of its specific difference from the following; it consists chiefly in the stiff hooked scales of the receptacle, upon which its utility to the fuller depends, but which are gradually lost, unless the plants be grown in a richly manured strong soil. In size and habit similar to the following, but the leaves are blunter and more constantly connected at the base.

DIPSACUS SYLVESTRIS. *Wild Teasel.* TAB. **195.**

Leaves often connected at the base. Scales of the receptacle narrow, straight. Involucre ascending.

Dipsacus sylvestris, *E. B.* 1032. *Smith* I. 193. *Lindley* 139. *Hooker* 60. *ed.* 2. 63.

Frequent by roadsides and on the banks of ditches, flowering in July. Stem about 4 feet high, branched, hollow. The leaves often united at the base so as to hold water, whence the Latin name of the genus and the common name of Venus's Kettle are derived.

DIPSACUS PILOSUS. *Small Teasel.* TAB. **196.**

Leaves petiolate, ternate, with small leaflets. Involucre reflexed.

Dipsacus pilosus, *E. B.* 877. *Smith* I. 193. *Lindley* 139. *Hooker* 60. *ed.* 2. 63. Shepherd's Staff, *vulg.*

In moist shady ground, in a calcareous soil, this sometimes occurs, but is far from being a general plant. It grows four feet high, and flowers in August and September.

GENUS LXIX. SCABIOSA. *Scabious.*

Nat. Order. DIPSACEÆ.

GEN. CHAR. *Involucre* of many leaves. *Receptacle* chaffy or naked. *Calyx* superior, double; the external minute, the internal with several bristle-shaped teeth.

Mostly showy, but probably useless, plants; perennial, rigid, with opposite leaves and branches, and terminal heads of flowers.

SCABIOSA SUCCISA. *Devil's-bit Scabious.* TAB. **197.**

Corolla 4-cleft, regular. Stem-leaves toothed. Heads of flowers nearly globular.

Scabiosa succisa, *E. B.* 878. *Smith* I. 194. *Lindley* 139. *Hooker* 61. *ed.* 2. 63.

This Scabious frequently ornaments pastures that are rather moist, both on low commons and on hilly spots, flowering from August to October. It is but slightly branched, and seldom exceeds a foot in height. The root is a remarkable illustration of the term *radix præmorsa.*

SCABIOSA ARVENSIS. *Field Scabious.* TAB. **198.**

Corolla 4-cleft. Marginal flowers radiant. Leaves pinnatifid, cut. Stem bristly.

Scabiosa arvensis, *E. B.* 659. *Smith* I. 195. Knautia arvensis, *Lindley* 140. *Hooker* 60. *ed.* 2. 63.

Common in corn-fields, where it flowers in July, contributing more to the ornament of the country than to the profit or honour of the farmer. Root mostly branched. Stem about a yard high, much-branched: the lower leaves are serrated, generally simple; the upper pinnatifid, or very rarely simple, toothed. The flowers held in the smoke of tobacco soon become of a most beautiful green, being a delicate test for alkali. Specimens of a rare variety, with all the leaves simple, were gathered by Mr. Thos. Hankey, in a coppice two or three miles west of Brighton, in September 1832. They were equally hispid with the common plants.

SCABIOSA COLUMBARIA. *Small Scabious.* TAB. **199.**

Corolla 5-cleft, irregular. Radical leaves ovate or lyrate, notched; the others pinnatifid, with linear segments.

Scabiosa columbaria, *E. B.* 1311. *Smith* I. 195. *Lindley* 140. *Hooker* 61. *ed.* 2. 63.

Peculiar to chalk, limestone, and gravelly countries, but there not uncommon: rare in Scotland and mountainous countries. Stem a foot or 18 inches high, producing flowers from June to August.

GENUS LXX. SHERARDIA. *Sherardia.*

Nat. Order. RUBIACEÆ.

GEN. CHAR. *Corolla* of 1 petal, funnel-shaped, superior. *Seeds* 2, each crowned with 3 teeth of the calyx.

Low branched herbs, with leaves in whorls and flowers generally terminal, sometimes axillary, several being collected together.

SHERARDIA ARVENSIS. *Blue Sherardia.* TAB. **200.**

All the leaves whorled. Flowers terminal.

Sherardia arvensis, *E. B.* 891. *Smith* I. 196. *Lindley* 130. *Hooker* 66. *ed.* 2. 68.

The *Sherardia,* or *Little Field Madder,* as it has been commonly called, though it has neither the characters nor properties of Madder, is frequent in fallow fields, and indeed even among growing corn, more particularly upon a light or gravelly soil, flowering throughout summer. The root is annual.

GENUS LXXI. ASPERULA. *Woodruff.*

Nat. Order. RUBIACEÆ.

GEN. CHAR. *Corolla* of 1 petal, funnel-shaped, superior. *Seeds* 2, not crowned.

Plants differing from those of the last genus in being more woody, and in having constantly terminal flowers without a calyx. The English name, Woodruff, alludes to the whorled position of the leaves.

ASPERULA odorata. *Sweet Woodruff.* Tab. **201**.

Leaves 8 in a whorl, lanceolate. Tufts of flowers on long stalks. Root perennial.

Asperula odorata, *E. B.* 755. *Smith* I. 197. *Lindley* 130. *Hooker* 65. *ed.* 2. 68.

Almost every dry mountainous wood abounds with the Woodruff, nor is it unfrequent in the more level countries on a calcareous soil. Its flowers, produced in May, are fragrant, particularly at night. The fresh herb has no smell; but as soon as it begins to dry, it exhales a pleasant and lasting fragrance like that of new hay, verging towards the flavour of bitter almonds.

ASPERULA arvensis. *Field Woodruff.* Tab. **201***.

Leaves 6—10 in a whorl, linear-lanceolate, obtuse. Flowers aggregated, terminal, sessile, in pairs. Bracteæ long, ciliated. Root annual.

Asperula arvensis, *Linn.*, *E. B. Supp.* 2792. *Willdenow, Sp. Plant.* I. 576. *Banks, Plymouth and Devonport Flora, No. VIII. Hooker, ed.* 2. 68.

A plant much resembling *Sherardia arvensis* both in the sessile flowers and their blue colour, and it differs from the *Asperula odorata* in these characters, and also in having a glabrous not bristly seed, and in being only annual. Specimens have been kindly presented to Mr. Sowerby by the author of the Plymouth and Devonport Flora above quoted: they were gathered a few yards within the left hand gate at the end of Longbridge, Saltram, where Mr. C. Johns discovered it in 1830, but where, however, the plant is now nearly if not quite lost, in consequence of the construction of a rail-road. In all probability it is an occasional visitor to England, being dispersed over nearly all Europe. England is one of the localities assigned to it by Willdenow, we know not upon what authority. It flowers from May to July. The root is used on the Continent to dye red.

ASPERULA cynanchica. *Squinancy-wort.* Tab. **202**.

Lower leaves 4 in a whorl; upper ones in pairs. Stem somewhat erect. Flowers 4-cleft.

Asperula cynanchica, *E. B.* 33. *Smith* I. 198. *Lindley* 130. *Hooker* 65. *ed.* 2. 68.

Found on dry chalky sunny banks in many parts of England, flowering in the middle of summer. The root is perennial, but does not thrive well in a garden, requiring its natural shelter of herbage. The flowers have a sweet smell, which is, however, rarely to be perceived. Dalechampius is the chief authority for the reputation this plant once had for the cure of quinsies; it is now out of use.

GENUS LXXII. GALIUM. *Bed-straw.*

Nat. Order. RUBIACEÆ.

GEN. CHAR. *Corolla* of 1 petal, flat, superior, 4-cleft. *Fruit* dry. *Seeds* 2. *Calyx* obsolete.

Slender herbaceous plants, harsh to the touch, with leaves in whorls, and numerous, more or less clustered, generally terminal flowers. The stem square, often rough at the angles, and the root fibrous. The species are numerous, but very similar to each other. The roots of most of them will afford a red dye nearly equal to Madder. There are few genera whose synonymy is more difficult. One of the species, *G. verum*, was formerly used to strew about beds with other fragrant herbs.

GALIUM CRUCIATUM. *Cross-wort.* TAB. **203.**

Leaves in fours, ovate, hairy. Stem simple above, hairy. Bunches of flowers lateral, with two leaves. Flowers polygamous. Fruit smooth.

Galium cruciatum, *E. B.* 143. *Smith* I. 199. *Lindley* 128. *Hooker* 62. *ed.* 2. 64. Mug-weed, *Auct.*

Grows everywhere about hedges and thickets, flowering early in summer. The root is perennial, creeping and slender. The flowers are formed exactly like those of other species of Galium, except that some are only male, wanting the germen, and of the hermaphrodite ones some are 5-cleft.

GALIUM VERUM. *Yellow Bed-straw.* TAB. **204.**

Leaves 8 in a whorl, linear, channeled, entire, rough. Flowers in dense panicles. Fruit smooth.

Galium verum, *E. B.* 660. *Smith* I. 208. *Lindley* 130. *Hooker* 61. *ed.* 2. 64. Ladies' Bed-straw, *vulg.*

The borders of dry fields and little bushy hills are frequently enlivened with the flowers of this plant, which diffuse a honey-like rather oppressive scent in July and August. The perennial root is of a tawny hue, evincing its affinity to Madder. The power of the herb to coagulate milk is well known; and Gerarde tells us the best Cheshire cheese in his time was made with it. The Scottish highlanders add the leaves of the common Nettle to it. If boiled with alum, it dyes a good yellow. The root is said to yield a better red than Madder: when cultivated, an acre has been found to produce 12½ cwt. Ray relates that the flowery tops afford a pleasant acid liquor by gentle distillation.

GALIUM PALUSTRE. *White Water Bed-straw.* TAB. **205.**

Leaves mostly 4 in a whorl, obovate, obtuse, unequal in size. Stems weak and spreading, branched in their upper part.

Galium palustre, *E. B.* 1857. *Smith* I. 199. *Lindley* 128. *Hooker* 62. *ed.* 2. 64.

Very generally found in ditches, among reeds and other tall water plants, on which its weak stems lean for support, and so rise 3 or 4 feet high. The leaves are linear, inclining to obovate, always obtuse, smooth except at the edges; on the main stem sometimes 5 or 6 in a whorl. The root is perennial, somewhat creeping. The flowers last throughout July and August.

GALIUM Witheringii. *Rough Heath Bed-straw.* Tab. **206**.

Leaves about 5 in a whorl, widely spreading, lanceolate, fringed with bristles. Stem upright, slightly branched, rough, with reversed hooks.

Galium Witheringii, *E. B.* 2206. *Smith* I. 200. *Lindley* 128. Galium palustre, *β. Hooker* 62. *ed.* 2. 64.

Dr. Withering found this Galium on high but boggy parts of Handsworth Heath near Birmingham, and was the first to distinguish it as a species. Its general appearance is so different from that of the smooth *Galium palustre,* that, although according to Mr. Wilson (see Hooker's *Brit. Flora*), "the transition from the smooth to the rough state may be observed on the borders of pools," we have thought it convenient to retain it. It is frequent in Wales, and has also been found in Cumberland.

GALIUM saxatile. *Smooth Heath Bed-straw.* Tab. **207**.

Leaves 6 in a whorl, obovate, obtuse, mucronate. Stem much-branched, prostrate, smooth. Fruit granulated.

Galium saxatile, *E. B.* 815. *Smith* I. 201. *Lindley* 128. *Hooker* 62. *ed.* 2. 65.

Very abundant in heathy bushy places, flowering plentifully from June to the end of summer. The fruit is small, neither bristly nor smooth, but studded all over with minute prominent granulations, by which alone it may be known from any other British *Galium*, except the *tricorne,* which is widely different from it in other respects.

GALIUM uliginosum. *Rough Marsh Bed-straw.* Tab. **208**.

Leaves 6 in a whorl, lanceolate, mucronate, rigid, their edges and the stem rough, with reflexed prickles. Fruit smooth, smaller than the corolla.

Galium uliginosum, *E. B.* 1972. *Smith* I. 201. *Lindley* 129. *Hooker* 62. *ed.* 2. 65.

Not uncommon, growing in wet ditches and boggy places among reeds, water-mints, &c., and flowering in July and August. The root is creeping and perennial. Stems a foot or more in height. The edges and keel of the leaves are rough, with minute prickles pointing backwards, while a simple row of similar prickles often occurs on the upper side near the margin, but which always point forwards.

GALIUM erectum. *Upright Bed-straw.* Tab. **209**.

Leaves about 8 in a whorl, lanceolate, veiny, bristle-pointed, their edges rough with prickles pointing forward. Stem weak, slightly hairy under each joint. Corolla taper-pointed. Fruit smooth.

Galium erectum, *E. B.* 2067. *Smith* I. 202. *Lindley* 129. *Hooker* 62. *ed.* 2. 65.

Grows in dry hedges and pastures, but is not common. Portslade in Sussex, near Cambridge, in Norfolk, and near Edinburgh, are among its localities. The perennial root produces stems that are upright when they meet with support, but weak and flaccid, and flowers that are very numerous in the middle of June.

GALIUM cinereum. *Grey Spreading Bed-straw.* Tab. **209***.

Leaves 6 or 8 in a whorl, linear, bristle-pointed, with marginal prickles all pointing forward. Stem weak, much-branched, smooth. Corolla rather taper-pointed. Fruit smooth.

Galium cinereum, *E. B. Supp.* 2783. *Smith* I. 203. *Lindley* 129. *Hooker* 63. *ed.* 2. 65.

A species discovered by the late Mr. G. Don on the banks of the river Leith near Slateford, three miles from Edinburgh, and near Kinnaird in Angusshire. The points in which it differs from *G. erectum*, its next akin, appear to be the smooth stem, the smaller number, linear form, and smoother margins of the leaves, which are also free from the reticulations conspicuous in that species, also the less dense inflorescence and the less elongated points of the corolla. Like that it is perennial, but flowers a month later.

GALIUM aristatum. *Bearded Bed-straw.* Tab. **209****.

Leaves 6 in a whorl, stalked, lanceolate, flat, veiny, bristle-pointed, with minute marginal prickles pointing forward. Stem much-branched, spreading, smooth. Corolla taper-pointed. Seeds smooth, kidney-shaped, separated.

Galium aristatum, *E. B. Supp.* 2784. *Smith* I. 203. *Lindley* 129. *Hooker* 63. *ed.* 2. 66.

Collected by the late Mr. G. Don in Angusshire. "The stems are numerous, a foot high, upright, with copious spreading branches, square, very smooth. Leaves 6 in a whorl on the main stem, and often on the branches, though sometimes but 4 or 5, the largest above an inch long on short broad stalks, elliptic-lanceolate, flat, pliant, deep green on both sides, with many veins, smooth, except the edges which are very minutely prickly. Flowers white, in terminal, forked, aggregate, compound panicles, with perfectly smooth slender but not capillary stalks. Segments of the corolla spreading; each tipped with a taper point of its own substance, not with a real bristle. Seeds smooth? or slightly granulated?"

Sir J. E. Smith shows this to be the true *G. aristatum* of Linnæus, and distinct from *G. sylvaticum*, whose fruit is a pair of globular seeds closely combined.

GALIUM SACCHARATUM. *Warty-fruited Bed-straw.* TAB. **210**.

Leaves 6 in a whorl, lanceolate, with marginal prickles pointing forward. Flower-stalks axillary, 3-flowered. Fruit warty, drooping.
Galium verrucosum, *E. B.* 2173. *Smith* I. 204. *Lindley* 129. G. saccharatum, *Hooker* 64. *ed.* 2. 66.

A very rare British plant, found in the Carse of Gowrie by the late Mr. G. Don. It has also been gathered near Malton in Yorkshire. It is annual, flowering from June to August. Dr. Hooker observes that the two lateral flowers are sterile, and fall away from each side of the large warted fruit, which, together with the marginal prickles of the leaves pointing forward, essentially distinguish this from the *G. tricorne.* Linnæus referred it to *Valantia* because of these abortive flowers; but the generic characters in the fruit of the real *Valantia* are quite unlike those of *Galium.*

GALIUM TRICORNE. *Rough-fruited Corn Bed-straw.* TAB. **211**.

Leaves about 8 in a whorl, their margins as well as the stem rough, with reflexed prickles. Flower-stalks axillary, 3-flowered. Fruit granulated, drooping.
Galium tricorne, *E. B.* 1641. *Smith* I. 205. *Lindley* 129. *Hooker* 64. *ed.* 2. 67.

Found occasionally in various parts of England in dry chalky fields. The annual root produces several weak simple stems, bearing flowers in July. The fruit is rather large, granulated with little points, and looking as if it had been shaved with a razor, not with pyramidal tubercles as in the last. The 3 flowers are generally all fertile.

GALIUM SPURIUM. *Smooth-fruited Corn Bed-straw.* TAB. **212**.

Leaves about 8 in a whorl, lanceolate, their margin as well as the stem rough with reflexed prickles. Flower-stalks axillary, many-flowered, cymose. Fruit smooth, erect.
Galium spurium, *E.B.* 1871. *Smith* I. 206. *Lindley* 129. *Hooker* 64. *ed.* 2. 67.

Very rare, being found only near Forfar. It is annual, flowering in June and July. Its habit much resembles that of *G. Aparine,* but the leaves are sometimes shorter.

GALIUM PUSILLUM. *Least Mountain Bed-straw.* TAB. **213**.

Leaves 8 in a whorl, linear-lanceolate, hair-pointed, entire, somewhat hairy. Panicles terminal, forked. Fruit very smooth.
Galium pusillum, *E. B.* 74. *Smith* I. 206. *Lindley* 129. *Hooker* 63. *ed.* 2. 66.

At Matlock Bath, in Derbyshire, this plant grows abundantly, thriving much in the calcareous rocky soil originally deposited by the Matlock water. It also grows on a limestone soil in various other parts of Great Britain. The root is perennial; the stems extremely numerous, from 3 to 10 inches high, forming large tufts, covered in July and August with innumerable milk-white flowers, very conspicuous at a distance.

GALIUM Mollugo. *Great Hedge Bed-Straw.* Tab. **214.**

Leaves 8 in a whorl, elliptical, bluntish, bristle-pointed, rough-edged. Flowers in loose spreading panicles. Corolla mucronate, mucro thick. Seeds smooth, globular.

Galium Mollugo, *E. B.* 1673. *Smith* I. 208. *Lindley* 130. *Hooker* 63. *ed.* 2. 66.

The tallest of our native species of Galium. It grows not unfrequently among bushes or upon hedges, rising 3 or 4 feet, receiving support for its weak stem among their branches, and in return decorating them with a profusion of flowers throughout July and August. On open chalky hills it is of more humble growth. The root is perennial and creeping. Stems flaccid, generally smooth, or sometimes as well as the leaves rather hairy, in which case it is Dr. Withering's *G. scabrum.*

GALIUM anglicum. *Wall Bed-straw.* Tab. **215.**

Leaves about 6 in a whorl, lanceolate, pointed, fringed with prickles. Stems straggling, rough. Flower-stalks forked, terminal. Fruit granulated, without hairs.

Galium anglicum, *E. B.* 384. *Smith* I. 209. *Lindley* 130. G. parisiense, *β. Hooker* 64. *ed.* 2. 66.

This is found, though very rarely, in Norfolk, Suffolk, Cambridgeshire, and Kent, for the most part upon old walls and upon a dry sandy soil, flowering in June and July, after which the plant soon dries up and perishes. The fruit is destitute of hairs, but when magnified it appears rough with minute tubercles. "In the hairy fruit," Sir J. E. Smith observes, "and the dark purple corolla, *G. parisiense* of Linnæus (*G. litigiosum* of DeCandolle, Ic. viii. t. 26.) differs from our plant." There appears, however, to be much uncertainty upon this point, for the *G. parisiense* of some Continental botanists is the same as the English plant. Whether the above-mentioned tubercles upon the fruit of *G. anglicum* may in any circumstances produce hairs has not yet been ascertained: the fruit of *G. parisiense*, though densely hairy, does not seem to be warty.

GALIUM boreale. *Cross-leaved Bed-straw.* Tab. **216.**

Leaves 4 in a whorl, ovate-lanceolate, 3-nerved, not hairy. Stem nearly erect. Fruit clothed with hooked bristles.

Galium boreale, *E. B.* 105. *Smith* I. 209. *Lindley* 130. *Hooker* 64. *ed.* 2. 67.

The Galium before us is one of the most easily determined. It grows only in mountainous countries, in rocky shady places about rivers, in the northern parts of England as well as in Scotland. The root is perennial, long, and slender, running deep among the stones, tinged with red, which colour, in common with its congeners, it communicates to wool. Stems much branched, rough to the touch, as are also the edges of the leaves, but not hairy. Copious panicles of milk-white flowers terminate the stem in July.

GALIUM Aparine. *Goose-grass,* or *Cleavers.* Tab. **217.**

Leaves 8 in a whorl, lanceolate, keeled, rough, fringed with reflexed prickles. Stem weak, rough with strong deflexed prickles. Fruit clothed with hooked bristles.

Galium Aparine, *E. B.* 816. *Smith* I. 210. *Lindley* 130. *Hooker* 65. *ed.* 2. 67.

This grows on every hedge, and is well known by the facility with which it adheres to the hands or clothes of such as go in the way of it. Ripe seeds especially hang to the coats of animals, and are thus widely dispersed. Most truly has Linnæus observed in one of his excellent dissertations, that plants so furnished with the means of sticking to animals, and whose seeds, therefore, are likely finally to be scattered about their habitations, are such as thrive best in a rank manured soil, instances of which are *Arctium, Xanthium, Cynoglossum, Asperugo,* and many more. The pert sceptic may despise the investigation of final causes; a rational naturalist will not easily resign the privilege of adoring at every step the immediate agency of an allwise and beneficent Providence.

This plant is annual, and flowers all the summer. The expressed juice is recommended as an antiscorbutic, but we have not had any opportunity of judging of its merits, nor does Dr. Woodville bring any fresh testimonies in its favour. "The seeds have been recommended as a substitute for coffee."

Genus LXXIII. RUBIA. *Madder.*

Nat. Order. Rubiaceæ.

Gen. Char. *Corolla* of 1 petal, bell-shaped, 3—5-cleft, superior. *Fruit* pulpy, 2-lobed. *Seeds* 2. *Calyx* obsolete.

Perennial plants, with whorled leaves and square stems; some of them are shrubby, and some even evergreen. The exotic species, *R. Tinctorum,* produces the *Madder,* or *Turkey Red,* so useful in dyeing, whence the name of the genus and of the natural order. For this purpose it is extensively cultivated in Holland.

RUBIA peregrina. *Wild Madder.* Tab. **218.**

Leaves about 4 in a whorl, elliptical, shining and smooth on their upper sides, their margins rough with reflexed prickles, evergreen. Flowers mostly 5-cleft.

Rubia peregrina, *E. B.* 851. *Smith* I. 211. *Lindley* 131. *Hooker* 65. *ed.* 2. 67.

The Wild Madder is not unfrequent in South Wales, Cornwall, Devonshire, St. Vincent's Rocks, Bristol, and some other places in the south-west part of England. It grows among bushes on a rich loamy soil, flowering in July, and ripening its fruit rather late in the autumn. The root is perennial, creeping, the inner bark red or orange-coloured, having the property of dyeing red like that of *R. Tinctorum*, from which, however, this plant is decidedly distinct, and from which it may be known by the smooth, though finely granulated, upper surfaces of the leaves. The herb in mild winters is evergreen.

GENUS LXXIV. EXACUM. *Gentianella.*

Nat. Order. GENTIANEÆ.

GEN. CHAR. *Calyx* 4-cleft. *Corolla* salver-shaped, with an inflated tube. *Stamens* shorter than the tube. *Capsule* superior, 2-valved, opening at the top. *Seeds* many.

Smooth, herbaceous, intensely bitter plants, with opposite leaves and branches, and terminal flowers.

EXACUM FILIFORME. *Least Gentianella.* TAB. **219**.

Leaves sessile. Stem filiform, branched. Flowers on long foot-stalks.

Exacum filiforme, *E. B.* 235. *Smith* I. 212. *Lindley* 177. *Hooker* 66. *ed.* 2. 68.

This, very uncommon, elegant little flower grows in Cornwall, Devonshire, Dorsetshire, Sussex, and Dursey Island near Cork, upon turfy bogs, not very sparingly. It is annual, flowers in July, and ripens its minute seeds in August.

GENUS LXXV. PLANTAGO. *Plantain.*

Nat. Order. PLANTAGINEÆ.

GEN. CHAR. *Calyx* 4-cleft. *Corolla* inferior, tubular, with a 4-cleft reflexed limb. *Stamens* very long. *Capsule* with 2 cells, bursting all round.

Perennial stemless herbs, whose small flowers, with their accompanying bracteæ, are collected into dense cylindrical spikes upon rigid, wiry stalks, springing with the leaves from the crown of the fibrous root. The juice of the leaves is mucilaginous and slightly astringent, but no great dependence is at present placed on their healing powers. Small birds are fond of the seeds, consequently the spikes of the larger are found to be saleable in large towns by those poor persons who can find no better employment than collecting them.

PLANTAGO MAJOR. *Greater Plantain.* TAB. **220**.

Leaves broadly ovate, somewhat toothed, with longish foot-stalks. Flower-stalks round. Seeds many in each cell.

Plantago major, *E. B.* 1558. *Smith* I. 213. *Lindley* 169. *Hooker* 67. *ed.* 2. 69. (Way-bread, *Vulg.*)

Few plants are more common or better known than this in pastures, waste ground, and even in places much trodden upon, varying according to the richness and moisture of the soil from 6 inches to above two feet in the length of the flower-stalks, with leaves in proportion.

PLANTAGO MEDIA. *Hoary Plantain.* TAB. **221.**

Leaves broadly ovate, downy, nearly sessile. Flower-stalks round. Spike cylindrical. Seeds solitary.

Plantago media, *E. B.* 1559. *Smith* I. 214. *Lindley* 169. *Hooker* 67. *ed.* 2. 69.

This is extremely common on dry chalky hills. On lawns it is such a nuisance that it has been found worth while to let fall a drop of sulphuric acid upon each root to destroy it.

PLANTAGO LANCEOLATA. *Rib-wort Plantain.* TAB. **222.**

Leaves lanceolate, tapering at each end. Flower-stalks angular. Spike ovate. Seeds solitary.

Plantago lanceolata, *E. B.* 507. *Smith* I. 214. *Lindley* 169. *Hooker* 67. *ed.* 2. 69.

Common everywhere in meadows and pastures, flowering in June and July. It has been recommended by the name of *Rib-grass* for cultivation.

PLANTAGO MARITIMA. *Sea Plantain.* TAB. **223.**

Leaves linear, channeled, fleshy. Flower-stalks round. Spikes cylindrical. Seeds solitary.

Plantago maritima, *E. B.* 175. *Smith* I. 245. *Lindley* 169. *Hooker* 67. *ed.* 2. 69.

No plant varies more in size than this. Its leaves are sometimes scarcely an inch, at other times more than a foot long. The number of flowers in its spikes is still more variable. It loves a muddy soil, especially near the sea, and is a favourite food of sheep. It flowers late in the summer.

PLANTAGO CORONOPUS. *Buck's-horn Plantain.* TAB. **224.**

Leaves linear pinnatifid. Flower-stalks round. Capsule imperfectly 4-celled. Seeds 4.

Plantago Coronopus, *E. B.* 892. *Smith* I. 216. *Lindley* 169. *Hooker* 68. *ed.* 2. 70.

Common on dry, sandy, gravelly ground, in flower nearly all the summer; the leaves and stalks are so decumbent as to be almost forced beneath the surface.

GENUS LXXVI. CENTUNCULUS. *Chaff-weed.*

Nat. Order. PRIMULACEÆ.

GEN. CHAR. *Calyx* 4-cleft. *Corolla* inferior, tubular, with a spreading 4-cleft limb. *Stamens* short. *Capsule* of 1 cell, bursting all round. *Seeds* many.

Small annual plants with alternate leaves and solitary axillary flowers. In the structure of the flower it is nearly related to the *Plantagineæ*, but distinguished, among other characters, by its single-celled capsule. There is a greater affinity between it and *Anagallis.*

CENTUNCULUS MINIMUS. *Small Chaff-weed.* TAB. **225.**

Flowers sessile. Corolla without glands at the base.
Centunculus minimus, *E. B.* 531. *Smith* I. 217. *Lindley* 183. *Hooker* 68. *ed.* 2. 70. (Bastard Pimpernel.)

One of the least of our "perfect plants," as they are called, and is perhaps reckoned more rare than it really is from being so easily overlooked. It grows on watery sandy heaths near London, and in various other parts of England; also in Ireland and Scotland.

GENUS LXXVII. EPIMEDIUM. *Barren-wort.*

Nat. Order. BERBERIDEÆ.

GEN. CHAR. *Calyx* of 4 caducous valves. *Petals* 4, opposite the valves of the calyx, inferior. *Nectaries* 4, inflated. *Pod* of 1 cell, 2-valved. *Seeds* many.

The remarkable flower is sufficient at once to distinguish this genus.

EPIMEDIUM ALPINUM. *Alpine Barren-wort.* TAB. **226.**

No leaf at the root. Leaf on the stem solitary, twice ternate.
Epimedium alpinum, *E. B.* 438. *Smith* I. 220. *Lindley* 15. *Hooker* 68. *ed.* 2. 70.

Root perennial, slender, creeping. Stems several, annual, scarcely a foot high, simple, succulent, with scales at the base. It flowers early in the spring, after which its leaves increase for a while, but soon wither away. It has been found rarely in woods in the North of England and in Scotland.

GENUS LXXVIII. CORNUS. *Cornel.*

Nat. Order. CAPRIFOLIACEÆ.

GEN. CHAR. *Calyx* of 4 teeth. *Petals* 4. *Drupe* inferior. *Nut* of 2 cells, each holding 1 seed.

The species are either shrubby or herbaceous, perennial, with, most generally, opposite, entire, smooth leaves. Flowers terminal in cymes or umbels; in the latter case protected by a large 4-leaved involucre.

CORNUS SANGUINEA. *Wild Cornel-tree.* TAB. **227.**

Shrubby. Branches straight. Leaves ovate, not silky. Cymes flat, destitute of involucre.

Cornus sanguinea, *E. B.* 249. *Smith* I. 221. *Lindley* 133. *Hooker* 69. *ed.* 2. 70. (Dog-wood.)

Common everywhere in hedges, but most plentifully on a chalk or limestone soil. It flowers in June, and the berries ripen in August, when the leaves and branches turn red. This shrub grows to the height of 4 or 5 feet; its wood is hard and even, fit for the use of turners, but small; it is also used for skewers. The berries and the whole plant are bitter. Oil is sometimes procured from the berries for lamps.

CORNUS SUECICA. *Dwarf Cornel.* TAB. **228.**

Herbaceous. Umbel between two branches.

Cornus suecica, *E. B.* 310. *Smith* I. 221. *Lindley* 133. *Hooker* 69. *ed.* 2. 71.

This plant grows abundantly in the valley called the Hole of Horum near Scarborough, about the Cheviot Hills, and in the Highlands of Scotland, flowering in June and July. It is nearly allied to a favourite American plant the *C. canadensis*, but does not thrive so well in a garden. The branches distinguish them. The fruit is sweetish.

GENUS LXXIX. PARIETARIA. *Wall-Pellitory.*

Nat. Order. URTICEÆ.

GEN. CHAR. *Calyx* 4-cleft, inferior, permanent. *Corolla* none. *Stamens* with wrinkled elastic filaments. *Seed* solitary, clothed with the lengthened calyx. Some flowers without stamens.

Generally roughish, branched herbs with alternate leaves. The flowers inclosed in an involucre of several segments; the central flower, and sometimes more, only female; the others have a coloured calyx, which enlarges around the seed. Commonly growing upon walls.

PARIETARIA OFFICINALIS. *Common Pellitory of the Wall.* TAB. **229.**

Leaves lanceolate-ovate, without lateral ribs at the base. Involucre 3-flowered, of about 7 ovate segments. Stem ascending.

Parietaria officinalis, *E. B.* 879. *Smith* I. 222. *Lindley* 218. *Hooker* 69. *ed.* 2. 71.

This is reckoned among the emollient herbs, and indeed is of a mucilaginous quality though inferior to the Mallow.

An inhabitant of rubbish and old walls in sheltered places; for it is more impatient of cold than many of our wild plants, and its juicy stems perish at the first attack of frost. The flowers are abundant from June to the end of autumn. The root is perennial.

GENUS LXXX. ALCHEMILLA. *Ladies' Mantle.*

Nat. Order. ROSACEÆ.

GEN. CHAR. *Calyx* inferior, tubular, with a spreading limb, divided into 8 unequal segments, persistent. *Corolla* none. *Seed* generally solitary.

Herbaceous plants with divided, alternate, leaves, upon petioles which have stipules at their bases, often silky. The flowers small and green, frequently in terminal bunches. The style is from the base of the germen, evincing its affinity to *Potentilla*, *Fragaria*, &c., which its habits and astringency confirm. The species are, moreover, somewhat mucilaginous.

ALCHEMILLA VULGARIS. *Common Ladies' Mantle.* TAB. **230.**

Leaves lobed, plaited, serrated.

Alchemilla vulgaris, *E. B.* 597. *Smith* I. 223. *Lindley* 103. *Hooker* 70. *ed.* 2. 71.

A native of dry and rather mountainous pastures, in which it often constitutes a great part of the herbage, flowering from the end of May to August. The root is perennial. The style is generally single, with a capitate stigma, but sometimes there are two styles, and in that case two seeds.

"Of all our natives," says Dr. Abbot with an amiable degree of enthusiasm, "this is the most elegant plant." Various circumstances often combine to attach a botanist to some particular favourite. Haller was enamoured with *Astrantia major,* Linnæus with *Trientalis europæa* and *Melampyrum nemorosum.* If I (Sir J. E. Smith) were to avow a similar partiality, it would be in favour of *Geum rivale.*

ALCHEMILLA ALPINA. *Alpine Ladies' Mantle.* TAB. **231.**

Leaves digitate, serrated, silky at the back.

Alchemilla alpina, *E. B.* 244. *Smith* I. 224. *Lindley* 103. *Hooker* 70. *ed.* 2. 72.

Most rocky mountains in the alpine parts of England and Scotland produce this elegant little plant; and in proportion to the barrenness and openness of its situation, is the rich silvery satin of the backs of its leaves and flowers more dense and splendid. Its lustre is most conspicuous when the plant is agitated by the wind. The flowers appear in July.

ALCHEMILLA ARVENSIS. *Field Ladies' Mantle.* TAB. **232.**

Leaves 3-lobed, lobes deeply cut. Flowers axillary.

Alchemilla arvensis, *E. B.* 1011. *Smith* I. 224. *Lindley* 103. *Hooker* 70. *ed.* 2. 72. (Parsley Piert.)

Very frequent in fallow fields, gardens, and on heathy banks, where the soil is gravelly or sandy, springing up in autumn or during mild weather in the course of the winter or early months, and flowering all the summer long. Root annual. Its stipules, insertion of the stamens and style, the alternate small lobes of the calyx, and, we may add, its flavour and scent, resembling Burnet, all prove its relation to the Icosandrous plants. It was formerly esteemed a powerful diuretic, and consequently used to remove gravel and even the stone.

GENUS LXXXI. SANGUISORBA. *Burnet.*

Nat. Order. ROSACEÆ.

GEN. CHAR. *Calyx* 4-cleft, superior, coloured. *Bracteas* 4. *Fruit* with 1 or 2 seeds.

Branched herbs with alternate pinnate leaves, which on the stem are subtended by stipules. Flowers in spikes.

SANGUISORBA OFFICINALIS. *Great Burnet.* TAB. **233.**

Spikes ovate.

Sanguisorba officinalis, *E. B.* 1312. *Smith* I. 218. *Lindley* 103. *Hooker* 71. *ed.* 2. 72.

As the *Poterium* prefers such limestone situations as are very dry and open, this plant, closely allied to it in habit and qualities, though in a different class, is found in rather moist and rich pastures, but always in limestone countries: it is most abundant in the North. The root is strong and perennial, the stem 2 feet high, erect, furrowed, with but few leaves, panicled above. It flowers in June and July. "Of no agricultural value, though it makes a part of hay in many rich northern pastures. The taste is astringent, and the plant has been recommended as a tonic; but the *Poterium*" above mentioned "is far more grateful in flavour."

SANGUISORBA MEDIA. *Oblong Burnet.*

Spikes cylindrical.

Sanguisorba media, *Smith* I. 219. *Lindley* 103. *Hooker* 71. *ed.* 2. 72.

"Taller and larger than the foregoing, with a much longer and truly cylindrical spike, of rather paler flowers." Found in pastures in the West of Scotland by Mr. G. Don. It is also a native of Siberia and Canada.

GENUS LXXXII. ISNARDIA. *Isnardia.*

Nat. Order. ONAGRARIÆ.

GEN. CHAR. *Calyx* 4-cleft, superior. *Petals* 4, or wanting. *Stigma* capitate. *Capsule* obovate, quadrangular, 4-valved, 4-celled, many-seeded, crowned with the calyx.

Only one species has been discovered in Great Britain of this neither useful nor ornamental genus.

ISNARDIA PALUSTRIS. *Marsh Isnardia.*

Stem procumbent, rooting, glabrous. Leaves opposite, ovate, acute, stalked. Flowers axillary, solitary, sessile, apetalous.

Isnardia palustris, *E. B. Supp.* 2593. *Smith* IV. 264. *Lindley* 109. *Hooker* 70. *ed.* 2. 72.

Long known as an inhabitant of various parts of Europe, and of America as far south as Mexico, but not suspected to be a native of England until Mr. Borrer discovered it growing in a pool at Buxtead in Sussex in 1827.

The stems are 6 or 8 inches long, procumbent, rounded, with opposite branches, of a reddish colour below, brownish above. Leaves entire, smooth, spreading, attenuated into a short footstalk, with the midrib and often the margins red, somewhat succulent. Flowers green, furnished with two small subulate bracteas. Calyx of 4 broadly ovate, acute, green segments, which enlarge and spread horizontally as the fruit ripens. It is annual, and flowers during great part of the summer.

ORDER II. DIGYNIA.

GENUS LXXXIII. BUFFONIA. *Buffonia.*

Nat. Order. CARYOPHYLLEÆ.

GEN. CHAR. *Calyx* of 4 leaves, inferior. *Petals* 4, entire. *Capsule* of 1 cell, with 2 valves and 2 seeds.

Slender plants, with opposite awl-shaped leaves, whose bases expand and are membranous at their edges. Branches alternate, and flowers terminal.

BUFFONIA TENUIFOLIA. *Slender Buffonia.* TAB. **234**.

Stem loosely panicled. Branches spreading, short, firm. Striæ on the calyx straight, parallel. Capsules scarcely so long as the calyx. Leaves subulate, spreading at the base.

Buffonia tenuifolia, *E. B.* 1313. *Smith* I. 225. B. annua, *Lindley* 47. *Hooker* 71. *ed.* 2. 73.

This inconspicuous plant, if ever it grew at Boston in Lincolnshire, where Plukenet asserts it to have been found, is now lost to Britain. De Candolle separates this from the species described by Linnæus, which is stated to be perennial, while this is annual, naming one *B. annua*, the other *B. perennis*. Our specimen was furnished from a garden, and we know not which is the kind mentioned by Plukenet.

ORDER III. TETRAGYNIA.

GENUS LXXXIV. ILEX. *Holly*.

Nat. Order. ILICINEÆ.

GEN. CHAR. *Calyx* inferior, with 4 or 5 teeth. *Corolla* wheel-shaped, deeply 4- or 5-cleft. *Stigmas* sessile. *Berry* with 4 seeds. Some flowers only containing stamens.

Evergreen shrubs or trees with coriaceous leaves and generally axillary bunches of small flowers, succeeded by pulpy fruit with stony cells containing one seed in each. The wood is hard and of a fine grain. The leaves of one species (*I. paraguensis*) are used as tea in Brazil.

ILEX AQUIFOLIUM. *Common Holly.* TAB. **235**.

Leaves ovate, acute, wavy, spinous.

Ilex aquifolium, *E. B.* 496. *Smith* I. 227. *Lindley* 73. *Hooker* 72. *ed.* 2. 73.

In woods, hedges, and thickets not uncommon, flowering in May, the berries ripening in autumn, and lasting through the winter. The Holly-tree is of slow growth and long duration; its wood, consequently hard and close-grained, is valued by turners. The bark, abounding in mucilage, by maceration in water, makes bird-lime. The branches, laden with leaves and berries and mixed with miseltoe and other evergreens, are a well-known and appropriate ornament in churches and houses, at a season when flowers are not easily obtained, as gay emblems of the joy which is then universally expressed. "The Druids are said to have introduced this custom for the accommodation of certain sylvan spirits, of a chilly constitution, while oaks were leafless. Agreeable associations, connected with returning seasons, keep up such practices long after their original meaning is forgotten," or even change their application. The leaves upon the upper branches are often free from lateral spines, to which circumstance poets have not failed to allude.

GENUS LXXXV. POTAMOGETON.

Nat. Order. ALISMACEÆ.

GEN. CHAR. *Flowers* upon a spike, sessile. *Calyx* none. *Petals* 4. *Stigmas* sessile. *Fruit* 4 sessile nuts.

Water plants with perennial creeping roots, branched stems, and both opposite and alternate leaves; in some species the upper leaves are broader than the others and float on the water. The flower spikes proceed from within a membranous sheath, similar to the stipules which most species have at the bases of their leaves, and which commonly embrace the stem. The flowers rise above the water to discharge the pollen. It should seem the respiration of these and other truly aquatic vegetables must be as different from the respiration of those which inhale atmospheric air directly as the breathing of fishes is from that of beasts and birds; accordingly we find the immersed leaves of an extremely different texture, pellucid as oiled paper, very vascular, harsh, and ribbed, but often extremely brittle. The surface of such plants, like that of aquatic animals, is destitute of hair or down of any kind.

POTAMOGETON NATANS. *Broad-leaved Pond-weed.* TAB. **236.**

Upper leaves oblong ovate, coriaceous, on footstalks, floating; lower leaves linear, membranous, sessile. Stipules large, free. Flower-stalks cylindrical.

Potamogeton natans, *E. B.* 1822. *Smith* I. 228. *Lindley* 250. *Hooker* 76. *ed.* 2. 77.

Common in pools and slow rivers, decorating them in July with innumerable pale upright spikes of flowers raised 2 or 3 inches above the floating leaves. This is the largest British Pond-weed.

POTAMOGETON HETEROPHYLLUM. *Various-leaved Pond-weed.* TAB. **237.**

Upper leaves elliptical, coriaceous, on footstalks, floating; lower leaves linear-lanceolate, membranous, sessile. Stipules rather small, free. Flower-stalks swelling upward.

Potamogeton heterophyllum, *E. B.* 1285. *Smith* I. 229. *Hooker* 75. *ed.* 2. 75.

P. Proteus, β. heterophyllus, *Lindley* 250.

Found in pools and ditches in various parts of Britain. The flower-stalk, sometimes curved, and the lower leaves distinguish this from the last.

POTAMOGETON RUFESCENS. *Reddish Pond-weed.* TAB. **238.**

Upper leaves elliptic-lanceolate, coriaceous, on footstalks, floating.

Lower leaves lanceolate, pointed, membranous, nearly sessile. Stipules rather small, free. Flower-stalks slightly swelling upwards.

Potamogeton fluitans, *E. B.* 1286. *Smith* I. 230. P. rufescens, *Lindley* 250. *Hooker* 75. *ed.* 2. 76.

The whole plant is remarkable for a reddish hue, especially in the upper part. It occurs in similar situations with the other floating species, and flowers in August and September.

POTAMOGETON LUCENS. *Shining Pond-weed.* TAB. **239.**

Leaves elliptic-lanceolate, mucronated, tapering into their slender footstalks, submersed. Spike dense, many-flowered. Stipules large, free.

Potamogeton lucens, *E. B.* 376. *Smith* I. 231. *Hooker* 75. *ed.* 2. 75. P. Proteus, *α.* lucens, *Lindley* 250.

Frequent in ditches, ponds, lakes, or slow-flowing rivers, chiefly on a clay soil. The flowers appear above the water after midsummer. This species appears to be destitute of floating leaves, unless *P. heterophyllum* be a variety of it, as Continental botanists suppose. There are besides two common varieties, one of which has lanceolate leaves tapering down very gradually to their insertion: this being figured in the *Flora Danica* and by most other authors, we have represented the other.

POTAMOGETON LANCEOLATUM. *Lanceolate Pond-weed.* TAB. **240.**

Leaves generally all lanceolate, membranous, entire, tapering at the base. Upper leaves sometimes floating, elliptic-lanceolate, upon peduncles equaling them in length. Spike ovate, dense, of few flowers. Stipules free, acute.

Potamogeton lanceolatum, *E. B.* 1985. *Smith* I. 232. *Lindley* 250. *Hooker* 75. *ed.* 2. 75.

This *Potamogeton* grows in the lakes of North Wales and in some of those of Scotland. The floating leaves have been noticed where the current is slow. It flowers in August.

POTAMOGETON PERFOLIATUM. *Perfoliate Pond-weed.* TAB. **241.**

Leaves ovate, heart-shaped, embracing the stem. Stipules free, small.

Potamogeton perfoliatum, *E. B.* 168. *Smith* I. 229. *Lindley* 249. *Hooker* 74. *ed.* 2. 75.

Very common in ponds and rivers. Every part of the plant is constantly immersed in the water, except the flower-spikes, which appear above the surface in July and August.

POTAMOGETON CRISPUM. *Curled Pond-weed.* TAB. **242.**

Leaves lanceolate, minutely serrated, waved at the margins. Stipules deciduous.

Potamogeton crispum, *E. B.* 1012. (Fresh-water Caltrops.) *Smith* I. 233. *Lindley* 249. *Hooker* 74. *ed.* 2. 75.

Common in ditches, ponds, and slow streams; the flowers are seen emerging from the water in June and July. Mr. Curtis observes that ducks eat the leaves as well as the seeds, and may therefore be useful in places where it increases to a troublesome degree, which are not unfrequent.

POTAMOGETON COMPRESSUM. *Flat-stalked Pond-weed.* TAB. **243.**

Leaves linear, obtuse, 5-ribbed. Stem compressed. Stipules small and free.

Potamogeton compressum, *E. B.* 418. *Smith* I. 233. P. pusillus, *Lindley* 249. P. pusillus, β. major, *Hooker* 74. *ed.* 2. 74.

Not uncommon in ditches and slow streams, flowering in June and July. It has most affinity with *P. pusillum*, but is twice as large in all its parts, and essentially distinguished by its compressed stem and two parallel ribs or nerves on each side the midrib of the leaf.

POTAMOGETON GRAMINEUM. *Grassy Pond-weed.* TAB. **244.**

Leaves linear-lanceolate, obtuse, 3-ribbed. Flower-stalk shorter than the free, obtuse stipules. Stem round.

Potamogeton gramineum, *E. B.* 2253. *Smith* I. 235. *Hooker* 74. *ed.* 2. 74. P. obtusifolius, *Lindley* 249.

Grows in ditches in Yorkshire and Norfolk, but it is rare. The flower-spikes, supported upon very short stalks, rise above water in July.

POTAMOGETON PUSILLUM. *Small Pond-weed.* TAB. **245.**

Leaves linear, obtuse, 3-ribbed. Flower-stalks much longer than the free stipules. Stem round.

Potamogeton pusillum, *E. B.* 215. *Smith* I. 235. *Lindley* 249. P. pusillus, α. *Hooker* 73. *ed.* 2. 74.

In ponds and ditches not very uncommon; flowers in the middle of summer. A smaller plant than either of the preceding.

POTAMOGETON ACUTIFOLIUM. *Sharp-leaved Pond-weed.*

Leaves linear, acuminated, 3-ribbed, with numerous intermediate, parallel veins. Flower-stalks shorter than the free stipules. Stem flat.

Potamogeton acutifolius, *E. B. Supp.* 2609. *Hooker* 74. *ed.* 2. 74.

A rare British species which grows in ditches in Sussex. It nearly resembles *P. gramineum*: its pointed leaves, which are nearly filled with slender veins parallel to the midrib, and its flat stem amply distinguish it.

POTAMOGETON ZOSTERÆFOLIUM. *Grass-wrach-like Pond-weed.*

Leaves broadly linear, acute, 3-ribbed, with numerous intermediate parallel veins. Flower-stalks much longer than the free stipules, swelling upward. Stem flat.

Potamogeton zosteræfolius, *E. B. Supp.* 2685. *Lindley* 249. *Hooker* 74. *ed.* 2. 75. P. cuspidatum, *Smith* I. 234.

Found in the lakes of Forfar and Rescobie in Scotland, and in a rivulet at Hovingham in Yorkshire. It is larger than the last; the long flower-stalks with cylindrical spikes of flowers, and the pointed but not attenuated leaves, mark the difference.

POTAMOGETON PECTINATUM. *Fennel-leaved Pond-weed.* TAB. **246.**

Leaves bristle-shaped, sheathing, 1-ribbed, distichous. Stipules adnate. Spike interrupted.

Potamogeton pectinatum, *E. B.* 323. *Smith* I. 236. *Lindley* 248. *Hooker* 73. *ed.* 2. 74.

This occurs not unfrequently in rivers, though if the stream be rapid it rarely flowers; when it does, the flowers rise above the water in June or July.

POTAMOGETON DENSUM. *Close-leaved Pond-weed.* TAB. **247.**

Leaves ovate, acuminated, opposite, crowded. Stipules wanting.

Potamogeton densum, *E. B.* 397. *Smith* I. 230. *Lindley* 248. *Hooker* 73. *ed.* 2. 73.

Not uncommon in ditches, ponds, and slow streams, flowering in the early part of summer.

GENUS LXXXVI. RUPPIA. *Ruppia.*

Nat. Order. ALISMACEÆ.

GEN. CHAR. *Calyx* none. *Corolla* none. *Fruit* 4 nuts raised upon long stalks.

A genus nearly related in habit to the last, but well distinguished by the stalked fruit. The flowers are rarely more than two upon each spike, which while young is inclosed within the sheathing base of the linear leaf; it is afterwards raised upon a long, sometimes spiral, stalk above the water, probably for the dispersion of the pollen; and when the anthers have fallen, the spike again sinks, and the fruit ripens under water.

RUPPIA MARITIMA. *Sea Ruppia.* TAB. **248.**

Fruit slightly beaked.

Ruppia maritima, *E. B.* 136. *Smith* I. 239. *Lindley* 251. *Hooker* 77. *ed.* 2. 77.

A good observer may, we believe, find this curious plant in most of our British salt-water ditches. The fruit ripens in August.

GENUS LXXXVII. SAGINA. *Pearl-wort.*

Nat. Order. CARYOPHYLLEÆ.

GEN. CHAR. *Calyx* of 4 valves. *Petals* 4. *Capsule* of 1 cell with 4 valves.

Small annual or perennial humble weeds with axillary flowers, which are either without petals entirely or have only short, entire, white ones. The seeds, contained in a capsule which bursts into 4 valves, are minute and numerous.

The old name *Sagina*—from *sagino*, 'to cram or fatten', which appears to have belonged to some kind of corn, as Millet or Sorghum,—is but ill applied to this genus, and indeed seems to have descended to it by chance, having been first joined as an adjective to *Alsine*, on which indeed several animals do feed, and then, for want of a better denomination, retained for the present genus.

SAGINA PROCUMBENS. *Procumbent Pearl-wort.* TAB. **249.**

Stems procumbent, smooth; petals very short. Leaves minutely pointed. Perennial.

Sagina procumbens, *E. B.* 880. *Smith* I. 238. *Lindley* 49. *Hooker* 77. *ed.* 2. 77.

No plant is more common than this in sandy waste places, neglected walks of gardens, and the interstices of paved courts, where its flowers are to be seen in plenty from May to the end of autumn. The stems take root at their joints, and the leaves remain green through the winter, provided the plant be not entirely burnt up by the summer's sun.

SAGINA MARITIMA. *Sea Pearl-wort.* TAB. **250.**

Stems nearly upright, divaricated, smooth. Leaves obtuse, without bristles. Petals obsolete. Annual.

Sagina maritima, *E. B.* 2195. *Smith* I. 239. *Lindley* 49. *Hooker* 78. *ed.* 2. 78.

Grows on the coast of England, Scotland, and Ireland; also on the summit of Ben Nevis. The rather fleshy leaves, entirely free from a bristle-like point, and the capsule shorter than the calyx, are among the characters which mark this species. Stamens sometimes 8.

SAGINA APETALA. *Annual Small-flowered Pearl-wort.* TAB. **251.**

Stems nearly upright, hairy. Leaves bristle-pointed, fringed. Petals minute. Annual.

Sagina apetala, *E. B.* 881. *Smith* I. 240. *Lindley* 49. *Hooker* 77. *ed.* 2. 78.

Scarcely less frequent than *S. procumbens*, but generally in more dry, open, and barren places, flowering in May and June.

Genus LXXXVIII. MŒNCHIA. *Mœnchia.*

Nat. Order. Caryophylleæ.

Gen. Char. *Calyx* 4-valved. *Petals* 4. *Capsule* of 1 cell, opening with 8 teeth.

A genus nearly related to the last, and also to *Holosteum*. Only one species is known.

MŒNCHIA erecta. *Upright Mœnchia.* Tab. **252**.

Sagina erecta, *E. B.* 609. Mœnchia erecta, *Smith* I. 240. *Hooker* 78. *ed.* 2. 78. Mœnchia glauca, *Lindley* 49.

This is a little annual plant of considerable neatness and elegance of structure, which grows frequently on dry gravelly pastures and heaths among grass, flowering in May.

Genus LXXXIX. RADIOLA. *Flax-seed.*

Nat. Order. Lineæ.

Gen. Char. *Calyx* in 4 3-cleft segments. *Petals* 4. *Capsule* of 8 cells and 8 valves. *Seeds* 8.

The single species known of this genus was formerly united with *Linum*. The remarkable structure of the calyx and the habit of the plant, not to mention differences of number, justify the separation. Two valves of the capsule are united to each of the 4 styles.

RADIOLA millegrana. *Thyme-leaved Flax-seed.* Tab. **253**.

Radiola millegrana (All-seed), *E. B.* 893. *Smith* I. 243. *Hooker* 79. *ed.* 2. 79. Radiola linoides, *Lindley* 54.

In sandy plashy spots this little annual may often be found, yet it should seem to be far from a general plant. It flowers in July and August, soon evincing the propriety of its old names by the multitude of little capsules with which it is laden.

Genus XC. TILLÆA. *Tillæa.*

Nat. Order. Crassulaceæ.

Gen. Char. *Calyx* fleshy, 3- or 4-cleft. *Petals* 3 or 4. *Capsules* 3 or 4, each with 2 seeds.

Small succulent plants with thick short leaves and axillary flowers, resembling and nearly related to *Sedum*, *Crassula*, and the like, but distinguished by the absence of nectariferous glands.

TILLÆA MUSCOSA. *Mossy Tillæa.* TAB. **254.**

Stems procumbent. Flowers sessile, mostly 3-cleft.

Tillæa muscosa, *E. B.* 116. *Smith* I. 242. *Lindley* 63. *Hooker* 78. *ed.* 2. 78.

The most dreary sands are not always unprofitable to the botanist, their loose and fluctuating surface being often arrested for a while, and destined to afford support to a tribe of plants whose constitution is fitted by the all-wise Creator to thrive best on the meagre nourishment they afford. Thus some of the vast African deserts are turned to account by means of Mesembryanthemums, Cotyledons, and other succulent vegetables; and we have here a production nearly allied to the latter, which flourishes on the driest sandy heaths, where few others would live, and at a season when Mosses and Lichens are dried up. Large tracts of this description in Norfolk, as well as Brandon Heath in Suffolk, are enlivened by its red colour from the end of May to September. The root is annual, the stem after a while procumbent, round, becoming quadrangular when dry. Leaves opposite, perfoliate. Two smaller leaves, or bracteas, often accompany the flowers.

CLASS V. PENTANDRIA.

ORDER I. MONOGYNIA.

GENUS XCI. MYOSOTIS. *Scorpion-grass.*

Nat. Order. BORAGINEÆ.

GEN. CHAR. *Calyx* 5-cleft. *Corolla* salver-shaped, with 5 obtuse lobes; throat furnished with short valves. *Fruit* of 4 naked seeds (or 1-seeded lobes), perforated at the base, fixed in the bottom of the calyx.

Annual or perennial hairy herbs with scattered leaves, and long, revolute, often forked, clusters of alternate flowers without bracteas. The throat of the corolla is half closed with 5 yellow vaulted scales, and the limb, which before expanding is often yellow or red, is most commonly a bright light blue when open. Few plants can be found of the same size to equal some of the species in beauty. They mostly grow in moist places or in shallow water.

MYOSOTIS PALUSTRIS. *Great Water Scorpion-grass.* TAB. **255.**

Seeds smooth. Calyx campanulate, covered with close-pressed, straight hairs; when in fruit, open and shorter than the flower-stalks. Limb of the corolla flat, longer than the tube. Root creeping.

Myosotis palustris, *E. B.* 1973, *also a fragment t.* 480. *Smith* I. 249. *Lindley* 165. *Hooker* 83. *ed.* 2. 99. (Forget-me-not.)

This plant is a general favourite, and not undeservedly so, if elegance of form and brilliancy of colour are entitled to favour; indeed, its beauty is so striking as to have acquired for it a kind of proverbial name: few who have observed the flower are likely to forget it. It is perennial, growing in the water at the margins of ponds and by the sides of rivers and ditches, where it blossoms in July and August.

MYOSOTIS REPENS. *Creeping Water Scorpion-grass.*

Fruit smooth. Calyx with straight appressed bristles, deeply 5-cleft; when in fruit, mostly connivent, shorter than the diverging pedicel. Limb of the corolla flat, longer than the tube; lobes somewhat emarginate. Hairs on the stem spreading.

Myosotis repens, *E. B. Supp.* 2703. *Hooker* 83. *ed.* 2. 99. *under "M. palustris."*

This species, for such it is probable it will be generally regarded, when the genus shall have received from British botanists the attention which its beauty may be expected to demand, has been observed not only in Scotland but in Yorkshire, Kent, and Sussex, in open heathy parts of forests, where it flowers from the end of May throughout the greater part of the summer. It is usually smaller than *M. palustris,* with a simple upright or ascending stem scarcely a foot high, unless when growing in a current it is drawn out to a greater length. In comparatively dry places it is procumbent. Root creeping, perennial; leaves lingulate, the lower ones attenuated to a distinct footstalk. The pedicels are longer than those of *M. palustris*; in their late recurved state mostly several times as long as the calyx, which is divided at least half way, and generally closed over the seeds. A small leaf is often found at the base of the terminal flower-spike, and several flowers of the lateral ones are subtended by similar leaves. The pubescence of the stem consists of long spreading hairs; that of the rest of the plant, except on the edges of the leaves, is appressed. The flowers are sometimes found white.

MYOSOTIS CÆSPITOSA. *Tufted Water Scorpion-grass.*

Fruit smooth. Calyx with straight appressed bristles, deeply 5-cleft. When the seed is ripe, campanulate, open, shorter than the pedicel. Limb of the corolla as long as the tube. Hairs on the stem appressed.

Myosotis cæspitosa, *E. B. Supp.* 2661. *Smith* I. 250. *Lindley* 165. *Hooker* 83. *ed.* 2. 100.

Common about ponds and boggy streams, where it flowers throughout the summer, but not in general growing in the water as *M. palustris* does, from which it is also well distinguished by the close-pressed hairs or bristles on the stem, the more deeply divided calyx, and the entire segments of the small corolla. The root is at most biennial, not stoloniferous nor creeping, but fibres are thrown out, nevertheless, from the lower joints of the stems, which are generally several.

MYOSOTIS ALPESTRIS. *Rock Scorpion-grass.* TAB. **256.**

Fruit smooth. Calyx very hairy, the lower hairs curved, deeply 5-cleft; when in fruit, campanulate, open, shorter than the diverging pedicels. Limb of the corolla flat, longer than the tube. Radical leaves on long footstalks.

Myosotis rupicola, *E. B.* 2559. M. alpestris, *Smith* I. 252. *Lindley* 166. *Hooker* 84. *ed.* 2. 100.

Grows at a high elevation on the Breadalbane range of Scottish mountains. The root is perennial, as in *M. palustris,* but the flowers are larger and more showy than even in that beautiful species. They begin to expand in July.

MYOSOTIS SYLVATICA. *Wood Scorpion-grass.*

Fruit smooth. Calyx with spreading uncinate bristles, deeply 5-cleft; when in fruit, ovate, closed, shorter than the diverging pedicel. Limb of the corolla longer than the tube, flat. Radical leaves on short dilated stalks. Root perennial.

Myosotis sylvatica, *E. B. Supp.* 2630. *Hooker* 84. *ed.* 2. 101. M. intermedia, *Smith* I. 250.

A brilliant ornament of dry shady places, but not of general occurrence. It abounds in Rokeby Park. It is not easy to distinguish this satisfactorily from *M. arvensis.* The calyx is more deeply cleft, and the bristles on its lower part are shorter and less remarkably hooked, and the whole herb is somewhat less copiously hairy; but neither can these characters, any more than the size of the plant and of the corolla, perhaps, be depended upon as constant. The *arvensis* differs, however, in being strictly annual.

MYOSOTIS ARVENSIS. *Field Scorpion-grass.*

Fruit smooth. Calyx with spreading uncinate bristles, half 5-cleft; when in fruit, ovate, closed, shorter than the diverging pedicels. Limb of the corolla concave, as long as the tube. Root annual.

Myosotis arvensis, *E. B. Supp.* 2629. *Hooker* 85. *ed.* 2. 101.

A very common plant, in cultivated ground, on hedge banks and in groves, flowering throughout the summer: it varies much in luxuriance and in height.

MYOSOTIS COLLINA. *Early Field Scorpion-grass.* TAB. **257.**

Fruit smooth. Calyx with spreading uncinate bristles; when in fruit, open, ventricose, as long as the divergent pedicel. Limb of the corolla concave, shorter than the tube. Root annual.

Myosotis arvensis, *E. B.* 2558. *Smith* I. 252. *Lindley* 166. M. collina, *E. B. Supp. sub fol.* 2629. *Hooker* 85. *ed.* 2. 101.

Common in dry fields and on sunny sandy banks, flowering early in summer, and soon withering away. The primordial raceme usually has one flower in the ala of the leaf at the base, by which, and in having no stalks to the racemes, the flowers beginning among the leaves, sometimes from the very base of the stem, this is well distinguished from the following.

MYOSOTIS VERSICOLOR. *Yellow and Blue Scorpion-grass.* TAB. **258.**

Fruit smooth. Calyx with spreading uncinate bristles; when in fruit, oblong, closed, longer than the almost erect pedicels. Limb of the corolla concave, shorter than the exserted tube. Root annual.

Myosotis versicolor, *E. B.* 480. *f.* 1. *Smith* I. 253. *Lindley* 166. *Hooker* 86. *ed.* 2. 102.

Found in dry sandy places, on walls, and also in somewhat boggy meadows, varying in height, according to its situation. The flowers are all remote from the leaves; they are yellow in the bud and when recently opened, but change to blue ; most of the other species have pink buds.

GENUS XCII. LITHOSPERMUM. *Cromwell.*

Nat. Order. BORAGINEÆ.

GEN. CHAR. *Corolla* funnel-shaped, its throat naked. *Calyx* cut into 5 segments. *Seeds* 4, naked.

Rough or bristly herbs, with mostly alternate leaves. Flower-spikes leafy, revolute, sometimes in pairs, with opposite leaves at their base, and a flower between them; the other flowers are axillary. The root of one species affords a red juice, but not of much value.

LITHOSPERMUM OFFICINALE. *Common Cromwell.* TAB. **259.**

Seeds polished, even. Corolla scarcely longer than the calyx. Leaves lanceolate, rather acute, their lateral veins conspicuous.

Lithospermum officinale, *E. B.* 134. *Smith* I. 254. *Lindley* 164. *Hooker* 80. *ed.* 2. 97. (Grey Mill, Grey Millet.)

Found here and there, flowering in May, in a dry gravelly or chalky soil. Root perennial, strong and tapering, whitish. Stem annual, erect, about 2 feet high. The ancient celebrity of the stony seeds as a cure for the stone, being founded upon a fallacious superstition, is hardly worth mentioning.

LITHOSPERMUM ARVENSE. *Corn Cromwell.* TAB. **260.**

Seeds rugged. Corolla scarcely longer than the calyx. Leaves lanceolate, obtuse, their lateral veins obscure.

Lithospermum arvense, *E. B.* 123. *Smith* I. 255. *Lindley* 164. *Hooker* 80. *ed.* 2. 97. (Bastard Alkanet.)

Often a troublesome weed in corn-fields and waste places, flowering from May to July. The root is annual, with red bark that abounds in a deep red dye, which will stain paper, linen, &c., and is easily communicated to oily substances. Linnæus says the country girls in the North of Sweden paint their faces with it.

LITHOSPERMUM PURPURO-CŒRULEUM. *Creeping Cromwell.* TAB. **261**.

Seeds polished and nearly even. Corolla much longer than the calyx. Leaves lanceolate, acute. Barren stems prostrate. Root creeping.

Lithospermum purpuro-cœruleum, *E. B.* 117. *Smith* I. 255. *Lindley* 164. *Hooker* 80. *ed.* 2. 97.

A rare plant, found in Kent, the West of England, and in Wales. The long woody root produces many round stems, most of which are procumbent and throw out fibres. The flowering stems are erect, about 18 inches high.

LITHOSPERMUM MARITIMUM. *Sea Cromwell.* TAB. **262**.

Seeds keeled, smooth. Flowers upon long pedicels. Leaves ovate, fleshy, and glaucous. Stem much branched, procumbent.

Pulmonaria maritima, *E. B.* 368. Lithospermum maritimum, *Smith* I. 256. *Lindley* 164. *Hooker* 81. *ed.* 2. 97.

A beautiful ornament of the sandy sea-coasts of Scotland and the North of England. It flowers in July. The root is perennial, fleshy and tapering. The whole plant succulent and glaucous. The leaves, although not hairy, are sprinkled with minute cartilaginous grains, similar to those from which the hairs or bristles spring in other plants of the same natural order. When dried, these grains remain white, while the rest of the herb becomes black. The flavour of the plant is thought to resemble that of oysters.

GENUS XCIII. ANCHUSA. *Alkanet.*

Nat. Order. BORAGINEÆ.

GEN. CHAR. *Corolla* funnel-shaped, its throat closed with 5 vaulted scales. *Calyx* 5-cleft. *Seeds* 4, naked, hollowed at the base.

Herbs in many respects resembling *Lithospermum*, but with shorter and less regular flower-spikes. The valves or scales in the corolla and less deeply divided calyx are artificial characters to distinguish them. The *A. tinctoria*, which grows in the South of Europe, yields the *Alkanet* of commerce.

ANCHUSA OFFICINALIS. *Common Alkanet.* TAB. **263**.

Spikes imbricated, the flowers all on one side. Bracteas ovate. Leaves lanceolate.

Anchusa officinalis, *E. B.* 662. *Smith* I. 258. *Lindley* 165. *Hooker* 82. *ed.* 2. 99.

Found plentifully, and to all appearance wild, on the links near Hartley Pans in Northumberland. The root is perennial, spindle-shaped, black outside. Stem 18 inches or 2 feet high. The whole plant is slightly mucilaginous; but neither its sensible qualities, nor the effects it produces in practice, are sufficient to account for its ancient reputation as a cordial, which is rather to be attributed to the wine in which it was administered. It flowers in June and July.

ANCHUSA SEMPERVIRENS. *Evergreen Alkanet.* TAB. **264.**

Flower-stalks axillary, each bearing 2 short spikes and 2 large, leaf-like bracteas. Leaves ovate.

Anchusa sempervirens, *E. B.* 45. *Smith* I. 258. *Lindley* 165. *Hooker* 82. *ed.* 2. 99.

Common in waste ground in and about Norwich, rare in other parts of England and Scotland. The first flowers appear in May and are followed by a long succession. The plant is always in leaf, and has thence obtained the name of *sempervirens,* although perfectly herbaceous.

GENUS XCIV. CYNOGLOSSUM. *Hound's-tongue.*

Nat. Order. BORAGINEÆ.

GEN. CHAR. *Corolla* funnel-shaped, its throat closed with 5 arched valves. *Calyx* 5-cleft. *Seeds* 4, naked, depressed, fixed to a central column by their inner margins.

Herbaceous plants, in habit much like the preceding genera, distinguished by the attachment of the seeds and more or less narcotic quality which is indicated by the fœtid scent. The flower-spikes are often nearly leafless.

CYNOGLOSSUM OFFICINALE. *Common Hound's-tongue.* TAB. **265.**

Stamens shorter than the corolla. Leaves broad-lanceolate, downy, sessile.

Cynoglossum officinale, *E. B.* 921. *Smith* I. 260. *Lindley* 166. *Hooker* 87. *ed.* 2. 103.

Abundant in waste ground and by road-sides, flowering in June and July. The root is tapering and fleshy, the herb about 2 feet high, downy and soft to the touch, exhaling a strong fœtid smell resembling that of mice. The seeds are clothed with hooked prickles, by which they adhere to the coats of animals, and are thus widely dispersed. The plant is narcotic, astringent, and mucilaginous, but dangerous to be taken internally.

CYNOGLOSSUM sylvaticum. *Green-leaved Hound's-tongue.* Tab. **266.**

Stamens shorter than the corolla. Leaves lanceolate, somewhat spathulate; the upper ones broad at the base, shining, and nearly naked above, rough beneath.

Cynoglossum sylvaticum, *E. B.* 1642. *Smith* I. 260. *Lindley* 166. *Hooker* 87. *ed.* 2. 103.

This species is found about hedges in several parts of England, especially in Essex; but like many other biennials or annuals it often changes its abode. Its upper leaves are more dilated at the base than in the *C. officinale*, of a bright and shining green, destitute of the soft downiness and grey hue of that plant; it is also almost without any fœtid smell. The root is biennial, and the flowers appear in June.

Genus XCV. PULMONARIA. *Lung-wort.*

Nat. Order. Boragineæ.

Gen. Char. *Corolla* funnel-shaped, its throat open. *Calyx* 5-sided, cleft at the margin. *Seeds* 4, naked.

Herbaceous, with hairy, alternate leaves, and crowded, erect flowers. A genus very nearly related to *Lithospermum.*

PULMONARIA officinalis. *Common Lung-wort.* Tab. **267.**

Leaves ovate.

Pulmonaria officinalis, *E. B.* 118. *Smith* I. 261. *Lindley* 164. *Hooker* 80. *ed.* 2. 97.

However common in every garden, the Lung-wort is of very unfrequent occurrence in a wild state, but has been found in various parts of Britain. In Italy, nothing is more common in groves and thickets. The root is perennial, the stems near a foot high. The flowers appear in April or May. The plant loves shade. Every part is mucilaginous; but its reputation as a cure for coughs arose not from that circumstance, but from the speckled appearance of the leaves, resembling the lungs!

PULMONARIA angustifolia. *Narrow-leaved Lung-wort.* Tab. **268.**

Leaves lanceolate.

Pulmonaria angustifolia, *E. B.* 1628. *Smith* I. 262. *Lindley* 164. *Hooker* 80. *ed.* 2. 97.

A rare plant, found in the Isle of Wight, Hampshire, and Flintshire. It is known from the *P. officinalis* by being much less spotted, and, especially, by the long lanceolate form of its radical leaves, which are not at all cordate or ovate. It is perennial, flowering in May.

GENUS XCVI. SYMPHYTUM. *Comfrey.*

Nat. Order. BORAGINEÆ.

GEN. CHAR. Limb of the *corolla* bell-shaped, the throat closed with awl-shaped scales. *Calyx* in 5 segments. *Seeds* 4, naked.

Rather large, herbaceous, hairy plants, with alternate and opposite leaves, whose edges are often decurrent. The flowers grow in forked, revolute bunches, from the base of the opposite leaves.

SYMPHYTUM OFFICINALE. *Common Comfrey.* TAB. **269**.

Leaves ovate-lanceolate, decurrent. Upper part of the stem winged. Root fleshy.

Symphytum officinale, *E. B.* 817. *Smith* I. 263. *Lindley* 164. *Hooker* 81. *ed.* 2. 98.

A frequent native of watery places, flowering from the end of May to September. Stem 2 or 3 feet high. The flower is sometimes purple. The root abounds in a pure tasteless mucilage, like that of the Marsh-mallow; and being more easily obtained, it ought not to be omitted in lists of medicinal plants. Such medicines are useful in irritations of the throat, intestines, and, above all, the bladder.

SYMPHYTUM TUBEROSUM. *Tuberous-rooted Comfrey.* TAB. **270**.

Leaves ovate, slightly decurrent. Upper part of the stem slightly winged. Root tuberous.

Symphytum tuberosum, *E. B.* 1502. *Smith* I. 263. *Lindley* 164. *Hooker* 81. *ed.* 2. 98.

A rare plant in England, but not uncommon in the lowlands of Scotland. It is perennial, scarcely a foot high, and flowers in June and July.

GENUS XCVII. BORAGO. *Borage.*

Nat. Order. BORAGINEÆ.

GEN. CHAR. *Corolla* wheel-shaped, the throat furnished with valves. *Calyx* 5-cleft. *Seeds* 4, naked.

A handsome genus, of which only one species has been naturalized in England.

BORAGO OFFICINALIS. *Common Borage.* TAB. **271**.

Leaves all alternate. Limb of the corolla longer than the tube, flat, the throat furnished with a double row of valves. Calyx spreading.

Borago officinalis, *E. B.* 36. *Smith* I. 264. *Lindley* 164. *Hooker* 82. *ed.* 2. 98.

The Borage, whose bright blue flowers decorate almost every dunghill and heap of rubbish, is one of those vegetables which, although not originally of British growth, are now so perfectly naturalized as to find a place in every catalogue of our wild plants. It is said to have been brought from the Levant, and was at first cultivated in gardens as a medicinal herb, being reckoned, apparently without reason, one of the four cordial flowers, with Roses, Violets, and Alkanet, and, like them, is possessed of very weak powers, if any. Of the two sets of scales in the flower, the outer is composed of emarginate valves, the inner of awl-shaped ones, which bear the 5 stamens. The whole herb is succulent and very mucilaginous, and has a peculiar faint smell when bruised. The root is scarcely more than biennial with us. The flowers appear in great plenty in the summer months.

GENUS XCVIII. ASPERUGO. *Madwort.*

Nat. Order. BORAGINEÆ.

GEN. CHAR. *Corolla* salver-shaped, its throat closed by valves. *Calyx* 5-cleft, when in fruit laterally compressed, and forming 2 unequally toothed lobes. *Seeds* 4, naked.

Herb annual, prostrate, very rough, with short, pointed bristles. Rare, and probably of little use.

ASPERUGO PROCUMBENS. *German Madwort.* TAB. **272.**

The only species.

Asperugo procumbens, *E. B.* 661. *Smith* I. 265. *Lindley* 165. *Hooker* 86. *ed.* 2. 103.

A plant of very rare occurrence. It has been found at Wangford, near Brandon, and about Newmarket Church; also in Durham, about Dunbar, and near Edinburgh. The root is small and slender. The herb rough, sticking to the hands and clothes like *Galium Aparine*; hence it has been called *Aparine major* and Great Goose-grass. The square weak stems grow a foot or two long. The seeds are smooth when young, but rugged when ripe.

GENUS XCIX. LYCOPSIS. *Bugloss.*

Nat. Order. BORAGINEÆ.

GEN. CHAR. *Corolla* funnel-shaped, with a curved tube, its throat closed with scales. *Calyx* 5-cleft. *Seeds* 4, naked, concave at the base.

Rather slender, upright, bristly herbs, with alternate leaves, and terminal slightly curled spikes of flowers.

LYCOPSIS ARVENSIS. *Small Bugloss.* TAB. **273.**

Leaves lanceolate, toothed, bristly. Calyx erect while in flower.

Lycopsis arvensis, *E. B.* 938. *Smith* I. 267. *Lindley* 165. *Hooker* 86. *ed.* 2. 98.

Common everywhere in fields and on dry hedge banks during the early part of summer, flowering chiefly in June, after which the whole herb is dried up, scatters its seeds, and the small annual root withers away. All the green parts of the herb are clothed with pungent bristles seated upon white tubercles. Its juices are mucilaginous.

GENUS C. ECHIUM. *Viper's Bugloss.*

Nat. Order. BORAGINEÆ.

GEN. CHAR. *Corolla* irregular, its throat open and naked. *Stigma* deeply cloven. *Calyx* 5-cleft. *Seeds* 4, naked.

Rigid, bristly, or hairy plants, sometimes shrubby. Flowers subtended by bracteæ, in two rows, upon curved spikes, which generally grow in pairs. Leaves alternate. Several species are very showy.

ECHIUM VULGARE. *Common Viper's Bugloss.* TAB. **274.**

Stem simple, bristly, and tuberculated. Stem-leaves lanceolate, rough with stiff hairs. Flowers in lateral spikes. Stamens longer than the corolla.

Echium vulgare, *E. B.* 181. *Smith* I. 268. *Lindley* 163. *Hooker* 79. *ed.* 2. 96.

A beautiful and magnificent weed, whose frequency in every highway and field, especially in a light soil, makes us despise it as an unprofitable intruder. The dry fields of Cambridgeshire and Norfolk are perfectly blue with its flowers in June and July. The root is biennial. Stems few, simple, strong, erect, 2 feet high. The juices are mucilaginous, as in most of the natural order.

The ECHIUM ITALICUM, *E. B.* 2081, is neither a British plant nor a native of Jersey. The species which grows in that island is much branched and has blue flowers. It will be given hereafter.

GENUS CI. PRIMULA. *Primrose and Cowslip.*

Nat. Order. PRIMULACEÆ.

GEN. CHAR. *Corolla* salver-shaped, its throat open. *Calyx* 5-toothed. *Capsule* superior, 1-celled, opening with 10 teeth. *Stigma* globose.

Elegant plants with very short perennial stems, which throw out thick, fibrous roots. Leaves in tufts. Flowers in umbels, which are commonly supported upon long stalks. Many of the species are greatly admired by horticulturists and florists.

PRIMULA VULGARIS. *Common Primrose.* TAB. **275.**

Leaves obovate, tapering to the base, toothed, wrinkled. Limb of the corolla flat, longer than the tube. Teeth of the calyx subulate. Umbel generally sessile.

Primula vulgaris, *E. B.* 4. *Smith* I. 270. *Lindley* 184. *Hooker* 89. *ed.* 2. 105.

One of the chief ornaments of a season which every pastoral poet delights to celebrate; hence, with the Violet, it has been more frequently honoured in verse than most other wild flowers. There are numerous varieties produced by cultivation, in which the teeth of the calyx generally afford the most decisive mark, although the calyx sometimes assumes the form and colour of the corolla. It is probable that the Polyanthos is a hybrid, partaking of the Cowslip in the form of the corolla, but retaining the leaf and calyx of the Primrose.

PRIMULA ELATIOR. *Oxlip.* TAB. **276.**

Leaves ovate, contracted below the middle, toothed, wrinkled. Limb of the corolla flat, as long as the tube. Teeth of the calyx subulate. Umbel upon a long stalk.

Primula elatior, *E. B.* 513. *Smith* I. 270. *Lindley* 184. *Hooker* 90. *ed.* 2. 105.

The Oxlip, or greater Cowslip, is much less frequent than either the Primrose or common Cowslip, between which it is by some thought to be a hybrid. It occurs in woods, thickets, or pastures, flowering in April. The flowers agree in scent with those of the Primrose. It may be propagated by seed as well as by the perennial root.

PRIMULA VERIS. *Cowslip.* TAB. **277.**

Leaves ovate, much contracted below the middle, dentated, wrinkled. Limb of the corolla concave, shorter than the tube. Teeth of the calyx short. Umbel upon a long stalk.

Primula veris, *E. B.* 5. *Smith* I. 271. *Lindley* 184. *Hooker* 90. *ed.* 2. 105. (Paigle.)

The Cowslip is nearly as common as the Primrose, and flowers nearly at the same time; it prefers a clay soil and an open situation. The flowers are fragrant and make a pleasant wine, approaching in flavour to the Muscadel wines of the South of France. The leaves of this and the Primrose afford nourishment to silk-worms; but those animals are so very delicate, and the quality of their silk is so apt to be injured by the most trifling causes, that they are seldom found worth cultivating as an article of commerce, unless fed with the best and most healthy leaves of the White Mulberry (*Morus alba*): it is, however, an object worthy of the curiosity of those who breed them for amusement to try what kinds of food may best be substituted in place of their natural food when a backward spring retards the growth of the Mulberry leaves.

PRIMULA FARINOSA. *Bird's-eye Primrose.* TAB. **278.**

Leaves oblong-ovate, crenated, even, mealy beneath. Limb of the corolla flat, its segments narrow.

Primula farinosa, *E.B.* 6. *Smith* I. 272. *Lindley* 184. *Hooker* 90. *ed.* 2. 106.

Wet pastures and little rills by the sides of mountains, from Yorkshire to Edinburgh, are the favourite situations of this elegant plant; nor can our British Flora boast many more beautiful productions.

PRIMULA SCOTICA. *Scottish Primrose.*

Leaves obovate, mealy, slightly toothed. Limb of the corolla flat, its segments obcordate, broad. Calyx tumid.

Primula scotica, *E. B. Supp.* 2608. *Smith* I. 272. *Lindley* 184. *Hooker* 90. *ed.* 2. 106.

This rarity seems to occupy the place of *P. farinosa* in the extreme northern part of the mainland of Scotland and in the Orkney Islands, where alone it has yet been found. It is undoubtedly the plant alluded to by Lightfoot, under the name of *P. farinosa,* as growing between Bighouse and Armidale in Sutherland. It is a shorter plant than *P. farinosa,* with blueish purple flowers, whose centres are yellow. The limb of the corolla is broader and shorter than in *P. farinosa.* The throat is thickened at the edge and almost divided into 5 scales. The leaves are powdery on both sides, and the calyx and flower-stalks are also powdered. The whole plant much resembles a diminutive Auricula.

GENUS CII. CYCLAMEN. *Sow-bread.*

Nat. Order. PRIMULACEÆ.

GEN. CHAR. *Corolla* wheel-shaped, the limb deeply divided into 5 reflexed, spiral segments; the tube very short, its orifice prominent. *Capsule* superior, 1-celled, opening with 5 teeth.

Stemless ornamental plants, whose leaves and flowers spring from solid, globose, acrid, perennial tubers, nourished by fibres. After flowering, the flower-stalks curl so as to bury the seeds in the ground.

CYCLAMEN HEDERIFOLIUM. *Ivy-leaved Sow-bread.* TAB. **279.**

Leaves heart-shaped, angular, finely toothed; their ribs and footstalks roughish.

Cyclamen europæum, *E. B.* 548. C. hederifolium, *Smith* I. 273. *Lindley* 183. *Hooker* 89. *ed.* 2. 105.

Wild specimens of this *Cyclamen* were found by Mr. D. E. Davy in the parish of Bramfield in Suffolk. The ground is a wet clay soil, sloping towards the south or west, and is overshadowed with trees.

Gerarde was told that this plant had been observed in Wales, Lincolnshire, and Somersetshire; but no one has confirmed that report. It flowers in April, and is easily cultivated in a shady border, where it sometimes produces flowers in the autumn, the time when the leaves, scarcely less ornamental, are in their greatest beauty. The root is a nauseous bitter purgative, with an acrid taste, not at first perceived, but durable; swine, however, eat it greedily.

GENUS CIII. MENYANTHES. *Buck-bean.*

Nat. Order. GENTIANEÆ.

GEN. CHAR. *Corolla* hairy within. *Stigma* cloven. *Capsule* superior, of 1 cell.

Smooth, succulent bog plants, with leaves supported upon sheathing footstalks. In one species, which is the type of the genus, the leaves are ternate and the flowers on a spike; in others, the leaves are simple and the flowers axillary: these latter are by many arranged in a separate genus named *Villarsia,* the essential character of which is to be found in the different structure of the corolla; the *M. indica* appears to connect the two.

MENYANTHES TRIFOLIATA. *Common Buck-bean.* TAB. **280**.

Leaves ternate.

Menyanthes trifoliata, *E. B.* 495. *Smith* I. 274. *Lindley* 179. *Hooker* 91. *ed.* 2. 106. (Marsh Trefoil.)

Our aquatic plants are those which principally vie with the most favourite exotics in beauty, and this is one of the most elegant of them. It is very frequent in watery places in a black boggy soil, and flowers in June or July. The root is perennial, long, and round. The herb is very bitter. A decoction of it is a powerful sudorific; hence it was long ago recommended for the rheumatism, and has been a popular remedy in England. It has also been given for the gout, ague, dropsy, and a formidable list of other disorders, in which if it prove at all useful it must be from its acting as a tonic, which it does when taken in small doses.

MENYANTHES NYMPHÆOIDES. *Fringed Buck-bean.* TAB. **281**.

Leaves opposite, heart-shaped, waved at the edges. Corolla with a fringed border.

Menyanthes nymphoides, *E. B.* 217. M. nymphæoides, *Smith* I. 275. Villarsia nymphæoides, *Lindley* 180. *Hooker* 92. *ed.* 2. 107.

This beautiful and rare aquatic is found occasionally in the Thames, chiefly in little recesses of its shores out of the great stream. It is much more frequent in the still canals of Holland than with us. The root is perennial, long, and stringy. The leaves, like those of *Nym-*

phæa, perspire very quickly, so as to become dry in a few hours, although at first so succulent. The flowers expand about August.

GENUS CIV. HOTTONIA. *Featherfoil.*

Nat. Order. PRIMULACEÆ.

GEN. CHAR. *Corolla* salver-shaped. *Stamens* standing on the margin of the tube. *Calyx* in 5 segments. *Capsule* superior, globose, with 1 cell.

A genus of handsome aquatic plants with deeply pinnatifid leaves and terminal spikes of flowers arranged in whorls. The capsule is globose, with many seeds, seated upon a globular receptacle. The stigma globose, undivided. The calyx is deeply divided and persistent.

HOTTONIA PALUSTRIS. *Water Featherfoil.* TAB. **282.**

Stalk bearing many flowers in whorls. Leaves pectinated.

Hottonia palustris, *E. B.* 364. *Smith* I. 276. *Lindley* 185. *Hooker* 91. *ed.* 2. 106. (Water Violet.)

Clear ditches and ponds on a gravelly soil, in various parts of England, are frequently adorned with this beautiful flower. The fibrous radicles run deep into the ground, and from the crown of the perennial root spring a few long leafy runners, which take root at their extremities and flower the following June. The leaves are constantly under water.

GENUS CV. LYSIMACHIA. *Loosestrife.*

Nat. Order. PRIMULACEÆ.

GEN. CHAR. *Corolla* wheel-shaped. *Calyx* 5-partite. *Capsule* superior, globose, pointed, with 10 valves.

Perennial herbaceous plants with mostly opposite, entire leaves, and yellow showy flowers, which are sometimes solitary and axillary, at others in axillary or terminal bunches. It is most probable that it received its Greek name in honour of Lysimachus, and that *Loosestrife* is merely a translation of it. The fable of the plant taming enraged animals was probably, like many others, the invention of some person of more learning than wisdom.

LYSIMACHIA VULGARIS. *Great Yellow Loosestrife.* TAB. **283.**

Flowers in terminal clusters accompanied with leaves. Leaves ovate-lanceolate, acute.

Lysimachia vulgaris, *E. B.* 761. *Smith* I. 277. *Lindley* 184. *Hooker* 88. *ed.* 2. 104.

An elegant ornament of watery shady places and the reedy banks of rivers, but not extremely common. It flowers in July, and having a perennial creeping root may be easily propagated, even where the soil is not very wet. The stems rise above 3 feet high; the leaves, although generally opposite, often grow 3 or 4 in a whorl.

LYSIMACHIA THYRSIFLORA. *Tufted Loosestrife.* TAB. **284.**

Flowers in axillary, stalked clusters. Leaves lanceolate. Segments of the corolla narrow.

Lysimachia thyrsiflora, *E. B.* 176. *Smith* I. 278. *Lindley* 184. *Hooker* 88. *ed.* 2. 104.

This very rare English plant is not uncommon in Scotland on the borders of some of the lakes growing in the water. It has a long perennial root, with whorls of fibres; a simple stem about 20 inches high bears the small yellow speckled flowers in the middle of summer.

LYSIMACHIA PUNCTATA. *Four-leaved Loosestrife.*

"Erect, downy, leaves ovato-lanceolate, whorled, petiolate. Peduncles 1-flowered, whorled, axillary."—*Hooker.*

Lysimachia punctata, *Hooker* 88. *ed.* 2. 104.

This much resembles *L. vulgaris.* "It was discovered by Mr. N. Backhouse, in 1803, on the margins of the Skern, north of Darlington."—*Hooker.* We have never seen fresh specimens.

LYSIMACHIA NEMORUM. *Wood Loosestrife.* TAB. **285.**

Flowers solitary, the segments of the calyx subulate. Leaves ovate, acute. Stem procumbent.

Lysimachia Nemorum, *E. B.* 527. *Smith* I. 278. *Lindley* 184. *Hooker* 89. *ed.* 2. 104. (Yellow Pimpernel.)

The pretty yellow Pimpernel of the woods is a great ornament to moist shady groves, flowering from the end of May till September. The roots are perennial.

LYSIMACHIA NUMMULARIA. *Creeping Loosestrife.* TAB. **286.**

Flowers solitary; the segments of the calyx ovate, acute; the filaments glandular. Leaves somewhat heart-shaped. Stem creeping.

Lysimachia Nummularia, *E. B.* 528. *Smith* I. 279. *Lindley* 184. *Hooker* 89. *ed.* 2. 105. (Money-wort.)

Herb Twopence, as this was formerly called, inhabits similar places with the preceding species, or, rather, the banks of wet ditches, creeping over the black boggy soil of very moist meadows, flowering copiously in June or July. Root perennial. The qualities of these two species of *Lysimachia,* either in medicine or for agricultural purposes, are, we believe, altogether unimportant. Their taste is herbaceous, with a little unpleasant pungency or astringency.

GENUS CVI. ANAGALLIS. *Pimpernel.*

Nat. Order. PRIMULACEÆ.

GEN. CHAR. *Corolla* wheel-shaped. *Stamens* hairy. *Calyx* 5-partite. *Capsule* superior, dividing transversely all round.

Elegant plants with opposite leaves, branches, and flowers. The flowers single-stalked, in the alæ of the leaves; the corolla, as well as the stamens, sometimes fringed with glandular hairs; the rest of the plant glabrous, often dotted. The stem square. The structure of the many-seeded capsule is remarkable.

ANAGALLIS ARVENSIS. *Scarlet Pimpernel.* TAB. **287**.

Leaves ovate, sessile, dotted beneath; edge of the corolla ragged glandulose.

Anagallis arvensis, *E. B.* 529. *Smith* I. 280. *Lindley* 185. *Hooker* 87. *ed.* 2. 103.

Var. *β*. cœrulea, *Hooker, ed.* 2. 103. A. cœrulea, *E. B.* 1823. *Smith* I. 280. *Lindley* 185. *Hooker* 87.

A common weed on sandy or gravelly soils in all kinds of cultivated land, flowering all the summer. The root is small and annual. The more rare blue Pimpernel is only a variety growing upright and having narrower leaves and more ragged edges to the corolla. This pretty flower opens only in fine weather, and infallibly closes against rain; whence it is called the Poor Man's Weather-glass; and it is one of the most certain that can be consulted, as most people have experienced. It is the only British scarlet flower besides the Poppy.

ANAGALLIS TENELLA. *Bog Pimpernel.* TAB. **288**.

Leaves roundish, somewhat pointed, on footstalks. Stem creeping. Stigma acute.

Anagallis tenella, *E. B.* 530. *Smith* I. 281. *Lindley* 185. *Hooker* 88. *ed.* 2. 103.

This most elegant little plant is not unfrequent throughout England, displaying its flowers in July and August. The root is perennial.

GENUS CVII. AZALEA. *Azalea.*

Nat. Order. ERICEÆ.

GEN. CHAR. *Corolla* bell-shaped. *Stamens* straight, regular, inserted into the receptacle. *Calyx* 5-partite. *Capsule* superior, of 3—5 bifid valves, whose incurved edges form as many cells.

A little shrubby plant, nearly resembling a heath, and quite different from the more showy, irregular-flowered American shrubs, generally known as Azaleas, but now referred to *Rhododendron.*

AZALEA PROCUMBENS. *Procumbent Azalea.* TAB. **289.**

The only species.

Azalea procumbens, *E. B.* 865. *Smith* I. 282. *Lindley* 172. *Hooker* 97. *ed.* 2. 111.

The heathy summits of all the highland mountains of Scotland and the whole of the Arctic regions are clothed with this elegant little shrub. The flowers appear early in July. The capsules ripen in August. The actual variation which occurs in the number of valves that form the capsule has given rise to different descriptions; the number 5 is probably rare.

GENUS CVIII. CONVOLVULUS. *Bind-weed.*

Nat. Order. CONVOLVULACEÆ.

GEN. CHAR. *Calyx* 5-parted. *Corolla* bell-shaped, 5-plaited. *Stigmas* 2. *Capsule* 1—3-celled, with 1 or 2 seeds in each cell, and from 1 to 3 valves.

Mostly twining plants, with long, angular, twisted, milky stems; some of the exotic species are shrubby. The corolla is formed of 5 rays united by a thin membrane into a bell-form, with a 5- or 10-angled edge. The calyx is subtended by two bracteas, which in some species are remote and small, in others large and embracing it. In the latter case the species are referred to the new genus *Calystegia,* instituted for them by Dr. Brown.

CONVOLVULUS ARVENSIS. *Small Bind-weed.* TAB. **290.**

Stem prostrate or climbing. Leaves arrow-shaped, their lobes acute. Bracteas remote, minute. Flowers generally solitary.

Convolvulus arvensis, *E. B.* 312. *Smith* I. 284. *Lindley* 167. *Hooker* 96. *ed.* 2. 110.

But too common a weed for the farmer and gardener, especially in a gravelly soil, where its deeply penetrating roots are difficult to destroy. The root is perennial, grows fast, and throws out numerous shoots from all parts, so that it is almost impossible to prevent it from spreading. The flowers, which in dry warm weather have an almond-like scent, close before rain. There is a variety with very long curved stigmas, which the late Mr. Sweet thought to be a species: it is not uncommon about London. Another variety, with a deeply divided and smaller corolla, mentioned by Ray, has been found near Norwich.

CONVOLVULUS Sepium. *Great Bind-weed.* Tab. **291**.

Climbing. Leaves arrow-shaped, the posterior lobes truncated. Flower-stalks square, single-flowered. Bracteas heart-shaped, close.

Convolvulus Sepium, *E. B.* 313. *Smith* I. 284. *Hooker* 96. *ed.* 2. 110. Calystegia sepium, *Lindley* 167.

This, one of the most elegant and graceful of all our wild flowers, is equally common with the preceding, though its place of growth be different. It inhabits moist hedges, twining about willows and reeds, and decorating them with its very conspicuous flowers throughout July and August. The roots are long, creeping, fleshy, and perennial. The flowers are sometimes of a rose colour. An extract of the herb or root is said to have a similar effect to the acrid and powerful purgative Scammony, to which it is nearly related.

CONVOLVULUS Soldanella. *Sea Bind-weed.* Tab. **292**.

Procumbent. Leaves kidney-shaped, angular. Flower-stalks single-flowered, with 4 membranous angles. Bracteas large, ovate, close.

Convolvulus Soldanella, *E. B.* 314. *Smith* I. 285. *Hooker* 96. *ed.* 2. 111. Calystegia Soldanella, *Lindley* 167.

A native of our sandy sea-shores. The beautiful, short-lived flowers may be found in July, not much later; they expand only in fine weather and in the early part of the day. The root is long, creeping, and perennial, and assists in binding together the loose soil in which it grows. It is a humble but useful plant, and seems tinged with the deep blush of conscious but unassuming worth when presented to our notice.

Genus CIX. VINCA. *Periwincle.*

Nat. Order. Apocyneæ.

Gen. Char. *Corolla* salver-shaped, its limb of 5 oblique lobes. *Calyx* 5-partite. *Fruit* superior, composed of 2 erect follicles. *Seeds* without beard or wing.

Trailing, milky, smooth, somewhat shrubby plants, with axillary flowers, and opposite, sometimes evergreen leaves. Both the British species are well-known ornaments in the shady parts of gardens and shrubberies. They are evergreen perennials, and require no care.

VINCA minor. *Lesser Periwincle.* Tab. **293**.

Stems procumbent. Leaves elliptic-lanceolate, smooth at the edge. Segments of the calyx small, lanceolate, smooth.

Vinca minor, *E. B.* 917. *Smith* I. 338. *Lindley* 176. *Hooker* 98. *ed.* 2. 112.

Rather a rare plant, in bushy places and upon banks, very frequently cultivated, especially the variety with variegated leaves. It is but half the size, and is more delicately formed, than the Greater Periwincle. Dr. Hooker observes justly "that the wood of the shoots is very tough, not so in the following."

VINCA MAJOR. *Greater Periwincle.* TAB. **294.**

Stems erect, at length procumbent. Leaves ovate, finely fringed. Segments of the calyx long, subulate, their edges ciliated.

Vinca major, *E. B.* 514. *Smith* I. 339. *Lindley* 176. *Hooker* 99. *ed.* 2. 113.

In hedges and groves, not very unfrequent in a truly wild state, though it has been so long cultivated and grows so easily that we cannot always depend upon its being of native growth. It flowers in May, rather later than the lesser species.

GENUS CX. POLEMONIUM. *Jacob's Ladder.*

Nat. Order. POLEMONIACEÆ.

GEN. CHAR. *Corolla* deeply 5-cleft, closed below the throat by the expanded, hairy bases of the filaments. *Stigma* 3-cleft. *Calyx* 5-cleft. *Capsule* superior, 3-celled, 3-valved.

Perennial, sparingly branched, herbs, with alternate pinnate leaves and terminal panicles of showy flowers. Pliny gives the derivation of the name from πολεμος, *war*, two kings having engaged in a war about the discovery of it. These kings must have been more jealous of botanical fame than even some of our modern botanists, whose friendly alliances have been unhappily destroyed by similar disputes. What plant was known to Pliny by this name is now uncertain.

POLEMONIUM CŒRULEUM. *Blue Jacob's Ladder.* TAB. **295.**

Leaves pinnated. Flowers erect. Calyx longer than the tube of the corolla. Root fibrous.

Polemonium cœruleum, *E. B.* 14. *Smith* I. 286. *Lindley* 168. *Hooker* 96. *ed.* 2. 111. (Greek Valerian.)

This, although very common in gardens, is one of the plants most rarely found wild in this country. It was found by botanists of the 17th century in the romantic and mountainous country about Malham Cove in the North of Yorkshire, where it still grows. A variety with white flowers, sometimes even from the same root as the blue ones (*Linnæus*): the faint purplish blue of the flowers being that which of all colours is the most apt to vary to white. Its flowers open in May and June. The herb has no sensible properties.

GENUS CXI. CAMPANULA. *Bell-flower.*

Nat. Order. CAMPANULACEÆ.

GEN. CHAR. *Corolla* bell-shaped, 5-toothed. *Stamens* fixed to the calyx, their filaments expanded at the base. *Stigma* 2- or 3-cleft, revolute. *Calyx* 5-cleft, superior. *Capsule* 2- to 5-celled, the cells opening laterally.

Perennial ornamental plants, varying much in habit, generally milky, with alternate leaves and often axillary flowers. The seeds are numerous; the calyx and sometimes the corolla are persistent. A difference in the form of the fruit has led some authors to divide this genus into three. We have not thought it necessary to follow them.

CAMPANULA ROTUNDIFOLIA. *Round-leaved Bell-flower.* TAB. **296**.

Radical leaves roundish heart-shaped, with a few serratures. Stem leaves linear entire.

Campanula rotundifolia, *E. B.* 866. *Smith* I. 287. *Lindley* 136. *Hooker* 100. *ed.* 2. 114. (Hare-bell *of some poets.*)

Universally admired on every heath and on mouldering walls and bushy borders of fields. On a rich soil, among bushes, the round leaves soon disappear; but cultivated in pots, they last a long time. It begins flowering in July, a much later season than that of the true Hare-bell, *Hyacinthus non-scriptus*, to which some poets have applied the same name. It is a taller plant than the *C. cæspitosa*, so common in gardens, which has, moreover, serrated, lanceolate leaves on the stem.

CAMPANULA PATULA. *Spreading Bell-flower.* TAB. **297**.

Radical leaves nearly oval, the others lanceolate, all crenated and roughish. Panicle spreading. Corolla spreading. Segments of the calyx toothed.

Campanula patula, *E. B.* 42. *Smith* I. 288. *Lindley* 136. *Hooker* 100. *ed.* 2. 114.

A rare plant, growing in the borders of fields and woods in the South-eastern parts of England. The root is biennial; the flowers appear in July; and as the herb, though milky and bitter, is frequently eaten down by cattle, side branches spring up and flower until the winter frosts destroy the root.

CAMPANULA RAPUNCULUS. *Rampion Bell-flower.* TAB. **298**.

Leaves undulated, the lower ones elliptic-lanceolate, crenated, roughish. Panicle compact, erect. Segments of the calyx entire.

Campanula Rapunculus, *E. B.* 283. *Smith* I. 289. *Lindley* 136. *Hooker* 101. *ed.* 2. 114.

A native of banks and borders of fields, in a gravelly soil, as far North as Yorkshire. It is an old kitchen-garden vegetable, the root having been formerly eaten either raw in salads or boiled. It is of the size and shape of a radish, milky, rather sweet, with some pungency and bitterness. The flowers appear in July and August. The angular stem grows 3 feet high; it is rough all over its lower parts.

CAMPANULA PERSICIFOLIA. *Peach-leaved Bell-flower.*

Radical leaves oblong or obovate, stalked; those of the stem linear lanceolate, sessile, all smooth and slightly serrated. Corolla spreading. Segments of the calyx entire.

Campanula persicifolia, *E. B. Supp.* 2773. *Smith* I. 290. *Lindley* 136. *Hooker* 101. *ed.* 2. 114.

The only authority for this being a native of Britain is Mr. Don, who found it generally single-flowered in woods near Cullen in Scotland. In gardens it is extremely common, growing 2 feet or more high, with several flowers, and often double either blue or white. The root is perennial, forming tufts. The lower leaves are elongated into a petiole of their own length; those of the stem nearly sessile, smaller upwards. The stem is angular and smooth.

CAMPANULA LATIFOLIA. *Giant Bell-flower.* TAB. **299.**

Leaves ovato-lanceolate. Stem unbranched, round. Flowers solitary pedunculated. Fruit drooping.

Campanula latifolia, *E. B.* 302. *Smith* I. 290. *Lindley* 136. *Hooker* 101. *ed.* 2. 114.

In the North of England and in Scotland this Bell-flower is not unfrequent, though rare in the Southern counties: it grows in shady moist places about the bases of mountains. The root is perennial, very milky, as well as the whole herb. Stem 3 or 4 feet high. This is sometimes cultivated in gardens. It flowers in August and is rather ornamental, occasionally varying to white or pale rose-colour.

CAMPANULA RAPUNCULOIDES. *Creeping Bell-flower.* TAB. **300.**

Radical leaves heart-shaped, on stalks; upper leaves lanceolate, sessile; all roughish and crenated. Flowers drooping to one side. Calyx reflexed.

Campanula rapunculoides, *E. B.* 1369. *Smith* I. 291. *Lindley* 136. *Hooker* 101. *ed.* 2. 115.

A rare British plant, but found in Yorkshire and Scotland, especially near Kirkaldy, where it is a troublesome weed in corn-fields. The figure is from a garden specimen. This plant flowers in July and August and is perennial, increasing considerably by its creeping roots. The stem is about a foot high. The corolla is hairy, larger than that of *C. Rapunculus.*

CAMPANULA TRACHELIUM. *Nettle-leaved Bell-flower.* TAB. **301.**

Leaves cordate, pointed, on footstalks, doubly and deeply serrated, hispid; the upper ones lanceolate. Segments of the calyx broad, hairy. Flower-stalks axillary with 1—3 flowers.

Campanula Trachelium, *E. B.* 12. *Smith* I. 292. *Lindley* 136. *Hooker* 102. *ed.* 2. 115.

Of all our species of British *Campanula* this is the most common; it occurs in woods and hedges in a gravelly soil, but is less frequent in Scotland. The stem is 2 or 3 feet high, simple, and angular. The flowers, sometimes white, appear in the middle of summer.

A decoction of the herb has been supposed, without foundation, to be useful in disorders of the throat.

CAMPANULA GLOMERATA. *Clustered Bell-flower.* TAB. **302.**

Leaves ovate, crenate. Flowers sessile, most of them in a terminal cluster. Stem angular, simple.

Campanula glomerata, *E. B.* 90. *Smith* I. 292. *Lindley* 136. *Hooker* 102. *ed.* 2. 115.

A native of dry chalky pastures, which its conspicuous flowers adorn very copiously in the months of July and August. The stem is from 6 to 18 inches high. The root is perennial, with long fibres. It is no contemptible ornament for rockwork or dry borders where little else will grow. A moist or rich soil makes the herb too luxuriant, the flowers pale and degenerate, taking away its alpine habit.

CAMPANULA HEDERACEA. *Ivy-leaved Bell-flower.* TAB. **303.**

Leaves heart-shaped, with angular lobes, on footstalks. Stem slender, branched, procumbent.

Campanula hederacea, *E. B.* 73. *Smith* I. 293. *Lindley* 136. *Hooker* 102. *ed.* 2. 115.

Grows in shady moist woods and on bogs in several parts of England and Scotland, and, though a bog plant, is capable of cultivation, which it well deserves. The roots are perennial; it flowers throughout the summer.

CAMPANULA HYBRIDA. *Corn Bell-flower.* TAB. **304.**

Leaves oblong, crenated, wavy. Stem often branched from the base. Corolla rotate, shorter than the calyx. Capsule prismatic.

Campanula hybrida, *E. B.* 375. *Smith* I. 293. *Hooker* 103. *ed.* 2. 116. Prismatocarpus hybridus, *Lindley* 135.

This grows in corn-fields on a chalky soil in the Southern parts of England, but by no means frequently. The root is small and annual. The flowers open towards the autumn. Nearly related to, if not a variety of, *Campanula Speculum*, which has not yet been found wild in England.

GENUS CXII. PHYTEUMA. *Rampion.*

Nat. Order. CAMPANULACEÆ.

GEN. CHAR. *Corolla* wheel-shaped, segments linear. *Stigma* 2- or 3-cleft. *Calyx* superior, 5-cleft. *Capsule* of 2 or 3 cells opening laterally.

A genus of milky plants, distinguished from *Campanula* by the crowded arrangement of the flowers and their long linear segments adhering together while in the bud, forming a curved horn, and opening first at their lower parts.

PHYTEUMA ORBICULARE. *Round-headed Rampion.* TAB. **305**.

Flowers in a round head. Leaves crenated, the radical ones heart-shaped or elliptic-lanceolate, upon long petioles. Stem-leaves lanceolate, sessile.

Phyteuma orbiculare, *E. B.* 142. *Smith* I. 295. *Lindley* 135. *Hooker* 101. *ed.* 2. 113.

This is one of our rare, local, elegant and singularly constructed productions: it grows abundantly in several parts of Surrey and a few other places in the South of England on a chalky soil, and may be cultivated without trouble in a gravelly or chalky situation. It grows a foot high, and flowers in July or August.

PHYTEUMA SPICATUM. *Spiked Rampion.*

Flowers in an oblong cylindrical spike. Lower leaves cordate-ovate, with somewhat compound serratures; upper ones lanceolate, minutely toothed. Bracteas linear, short, entire. Style pubescent.

Phyteuma spicatum, *E. B. Supp.* 2598. *Lindley* 135. *Hooker* 100. *ed.* 2. 113.

Parkinson speaks of this Phyteuma as growing wild "in divers places of this land;" but no subsequent botanist appears to have noticed it in Britain until the Rev. Ralph Price met with it in 1825 near Hadlow Down, in Mayfield, Sussex, where, and also in the parish of Waldron, it grows in woods, thickets, and hedges, and fields recently cleared of wood, flowering in June. The stem rises nearly 3 feet high, with few leaves, and terminates in a spike of yellowish white flowers, which in strong plants gradually attains the length of 3 or 4 inches. The root was formerly cultivated as a salad; hence there is some reason to doubt its being indigenous.

GENUS CXIII. JASIONE. *Sheep's Scabious.*

Nat. Order. CAMPANULACEÆ.

GEN. CHAR. *Corolla* wheel-shaped, segments linear. *Stigma* club-shaped. *Anthers* united at the base. *Calyx* 5-toothed, superior. *Capsule* imperfectly 2-celled, bursting at the top.

A herb with alternate entire leaves and branches, each supporting a convex head of blue flowers, subtended by an irregular circle of ovate bracteas. Distinguished from *Phyteuma*, to which and *Campanula* it is related in qualities, by the united anthers and by the seed-vessel, in which the partitions do not reach to the central column, and which has a terminal opening.

JASIONE MONTANA. *Common Sheep's Scabious.* TAB. **306.**

The only known species.

Jasione montana, *E. B.* 882. *Smith* I. 296. *Lindley* 137. *Hooker* 99. *ed.* 2. 112.

The pretty blue flowers of the Sheep's Scabious or Sheep's-bit are conspicuous in dry sandy fields and pastures in the middle of summer, and the bladdery little capsules remain some time after their seeds are scattered. The root, although woody, is annual. The central flowers are often abortive.

GENUS CXIV. LOBELIA. *Lobelia.*

Nat. Order. LOBELIACEÆ.

GEN. CHAR. *Corolla* 2-lipped, 5-lobed, the tube split on the upper side. *Anthers* united. *Stigma* capitate. *Calyx* 5-cleft. *Capsule* half inferior, with 2 or 3 cells.

Acrid, milky herbs, nearly related to *Campanula.*

LOBELIA DORTMANNA. *Water Lobelia.* TAB. **307.**

Leaves subcylindrical, composed of 2 tubes. Stem simple, almost leafless.

Lobelia Dortmanna, *E. B.* 140. *Smith* I. 297. *Lindley* 137. *Hooker* 99. *ed.* 2. 113.

The beautiful lakes of Westmoreland and Cumberland abound with this elegant and singular plant. Their gravelly bottoms are generally covered with a thick carpet of its leaves, the flowering part of the stem being all that rises above the water. The root is perennial, producing flowers in July. The germen in ripening becomes erect, an example, among numerous others, showing that it is not the weight of the flowers that makes them droop, the fruit of such being almost always upright, for the seeds are thus more surely retained until ripe, and then more extensively scattered. The herb abounds with a milky juice.

LOBELIA URENS. *Acrid Lobelia.* TAB. **308.**

Stem erect. Lower leaves obovate, petioled; upper ones lanceolate, all toothed. Flowers in a terminal raceme. Calyx downy.

Lobelia urens, *E. B.* 953. *Smith* I. 298. *Lindley* 137. *Hooker* 99. *ed.* 2. 113.

This rare plant is only found in Devonshire. It is perennial, growing upon heaths among small shrubs, and flowering about September. The root is fibrous, increasing, like most of the genus, by offsets. Stem about a foot high. The whole herb is milky, fœtid, and very acrid.

GENUS CXV. VERBASCUM. *Mullein.*

Nat. Order. SOLANEÆ.

GEN. CHAR. *Corolla* wheel-shaped, a little irregular. *Stamens* bearded, declining. *Calyx* 5-partite, inferior. *Capsule* with 2 cells and 2 valves.

Tall biennial plants, with long terminal clusters or spikes of flowers and alternate leaves; the stem is more or less branched, and with the leaves in several species very woolly. The juice is mucilaginous and narcotic. The species are remarkable for the facility with which they mix. When the stem is struck sharply with a hard substance, the corolla is forced off by the collapsing calyx of every open flower in a few minutes.

VERBASCUM THAPSUS. *Great Mullein.* TAB. **309.**

Leaves decurrent, woolly on both sides. Stem simple. Flowers nearly sessile, densely crowded.

Verbascum Thapsus, *E. B.* 549. *Smith* I. 308. *Lindley* 181. *Hooker* 95. *ed.* 2. 109. (High Taper.)

Frequent on banks, hedges, and waste ground, in a gravelly and calcareous soil, flowering in July and August. The root is biennial, spindle-shaped. A pint of cow's milk, with a handful of the leaves of this Mullein or the *V. pulverulentum,* t. 311, boiled in it to half a pint, sweetened, strained, and taken at bed-time, is a pleasant emollient and nutritious medicine for allaying a cough or removing the pain and irritation of the piles. Dr. Hooker relates that "the flowers when dried in the sun give out a fatty matter, used in Alsace as a cataplasm in hæmorrhoidal complaints."

VERBASCUM LYCHNITIS. *White Mullein.* TAB. **310.**

Leaves oblong-wedge-shaped, nearly smooth on the upper side. Stem angular, panicled.

Verbascum Lychnitis, *E. B.* 58. *Smith* I. 309. *Lindley* 181. *Hooker* 95. *ed.* 2. 109.

Gathered about Dartford in Kent, flowering in June. It loves a chalky soil, but has nevertheless been found near Truro on clay-slate. This Mullein is remarkable for its straight, wand-like, angular stem, producing great numbers of flowers in a compound, clustered, terminal racemus, one of the lateral branches of which is all our plate would admit.

VERBASCUM PULVERULENTUM. *Yellow Hoary Mullein.* TAB. **311.**

Leaves oblong-ovate, slightly serrated, covered with mealy wool. Stem round, panicled.

Verbascum pulverulentum, *E. B.* 487. *Lindley* 181. *Hooker* 95. *ed.* 2. 110.

In Norfolk and Suffolk this plant grows plentifully in waste ground: it is biennial, flowering in July, at which time it forms a magnificent golden pyramid a yard high. The leaves are often a foot long: the mealy down is easily rubbed off, and, when seen in a microscope, is found to consist of numerous starry entangled tufts.

VERBASCUM NIGRUM. *Dark Mullein.* TAB. **312.**

Leaves oblong-heart-shaped, on footstalks, crenated, slightly downy.

Verbascum nigrum, *E. B.* 59. *Smith* I. 311. *Lindley* 181. *Hooker* 95. *ed.* 2. 110. (Black Mullein.)

This species loves a gravelly soil. It is rare in Scotland. The dark green leaves are sometimes horny beneath, especially the upper ones. The racemus of flowers is longer and more simple than in most of the others. The flowers are a great ornament to shady lanes about midsummer. The root is perennial.

VERBASCUM VIRGATUM. *Large-flowered Mullein.* TAB. **313.**

Leaves oblong-lanceolate, toothed, sessile; the radical ones somewhat lyrate, downy. Stem branched. Flowers clustered, nearly sessile.

Verbascum virgatum, *E. B.* 550. *Smith* I. 311. *Lindley* 181. *Hooker* 95. *ed.* 2. 110.

This plant was first observed growing plentifully in a field near Wrexham by Mrs. Nash, who planted it in her garden at Bevere near Worcester, from whence, probably, its seeds escaped to the neighbourhood. The root is thick, branched, and biennial: the whole plant is much larger than *V. Blattaria*, being 5 or 6 feet high and much branched. It is copiously propagated by seed, and therefore can hardly be considered a mule between *V. Blattaria* and some other.

VERBASCUM BLATTARIA. *Moth Mullein.* TAB. **314.**

Leaves embracing the stem, oblong, smooth, serrated; the radical ones sinuated. Flowers distant.

Verbascum Blattaria, *E. B.* 393. *Smith* I. 312. *Lindley* 181. *Hooker* 95. *ed.* 2. 110.

Found about three miles from Rochester on the Medway, in which neighbourhood it is mentioned as growing in Ray's time. It is not uncommon in Devonshire and Cornwall. In gardens it is frequently cultivated, and continues to ornament them from July to November, or later if the weather be mild. The root is annual, the stem 3 or 4 feet high.

Hybrid varieties, between several species of this genus, are occasionally found; among them may be reckoned, perhaps, the plant taken for *V. thapsiforme* by Mr. Lindley (*Synopsis* 181.), but of which he is himself at present doubtful; we have no longer, therefore, his authority for admitting that name into the list of British plants. *V. ferrugineum* also still remains in doubt (*Hooker, ed.* 2. 110.).

GENUS CXVI. DATURA. *Thorn-apple.*

Nat. Order. SOLANEÆ.

GEN. CHAR. *Corolla* funnel-shaped, plaited. *Calyx* inferior, tubular, angular, deciduous. *Capsule* with 2 partly divided cells and 4 valves.

Herbaceous or shrubby plants, with round dichotomously branched stems and scattered leaves. The flowers, mostly in the forks of the branches, large and showy. The fruit either smooth or variously spiny. Juice narcotic. The herb is, consequently, as well as others of the same natural order (*Luridæ*, Linn.), poisonous.

DATURA STRAMONIUM. *Common Thorn-apple.* TAB. **315**.

Fruit spinous, ovate, erect. Leaves ovate, sinuated and angular, smooth.

Datura Stramonium, *E. B.* 1288. *Smith* I. 314. *Lindley* 181. *Hooker* 93. *ed.* 2. 108.

Like the Borage, and a few other plants that thrive on dunghills, the Thorn-apple, although originally exotic, is now naturalized among us. It often occurs about London, and Mr. Curtis observes that it is sure to spring up among American earth. The root is annual; the herb smooth, fœtid, about 3 feet high; the flowers sweet-scented. The woody fibres of the fruit, retaining its form, are easily procured by maceration in water, and form a curious and elegant preparation. The leaves and stem, dried and smoked like tobacco, are useful in such disorders of the chest as are relieved by narcotics. Fomentations with a decoction of them and other preparations are efficacious in removing tumours or allaying pain. Small quantities of the powdered leaves (under 8 grains) may be taken internally as a narcotic.

GENUS CXVII. HYOSCYAMUS. *Henbane.*

Nat. Order. SOLANEÆ.

GEN. CHAR. *Corolla* funnel-shaped, with an unequally 5-lobed limb. *Calyx* tubular, 5-cleft. *Capsule* inclosed in the tube of the calyx, 2-celled, opening by a lid.

Fœtid, downy, narcotic plants, with alternate sinuated leaves and veiny flowers. All parts, except the seeds, poisonous.

HYOSCYAMUS NIGER. *Common Henbane.* TAB. **316**.

Leaves sinuated, clasping the stem. Flowers sessile.

Hyoscyamus niger, *E. B.* 591. *Smith* I. 315. *Lindley* 181. *Hooker* 94. *ed.* 2. 108.

Henbane is not uncommon in waste ground about villages and by the sides of roads in dry dusty places, flowering in July. The root is annual, spindle-shaped; the stem bushy. The whole herb is downy, viscid, and extremely fœtid, though a slight degree of its odour is to some people not unpleasant. Its qualities are highly and dangerously narcotic; but, like many other poisons, it may, under proper management, prove an useful medicine. The seeds and capsules together, smoked as tobacco, are in some places a popular remedy for the toothache; but convulsions and temporary insanity sometimes follow its use. The seeds, like those of Poppies, may be eaten without any narcotic effect.

GENUS CXVIII. ATROPA. *Dwale.*

Nat. Order. SOLANEÆ.

GEN. CHAR. *Corolla* bell-shaped. *Stamens* distant, incurved. *Calyx* inferior, 5-partite. *Fruit* a 2-celled berry.

Herbaceous or shrubby plants, of narcotic, poisonous properties. Their leaves are generally simple, and two are often placed near together on the same side of the stem. The flowers also are lateral, not always in the alæ of the leaves. The corolla is regular, but the stamens vary in length. The anthers open along the sides of their lobes.

ATROPA BELLADONNA. *Common Dwale.* TAB. **317**.

Stem herbaceous. Leaves ovate, undivided. Flowers solitary.

Atropa Belladonna, *E. B.* 592. *Smith* I. 316. *Lindley* 182. *Hooker* 94. *ed.* 2. 109. (Deadly Nightshade.)

In hedges and waste ground, more especially on a chalky soil, but happily not very frequent at present, it having by common consent been generally eradicated. The flowers appear in June, and the fruit ripens in August. The root is perennial, creeping, thick, fleshy, and whitish; the stems annual, about 3 feet high. This is, perhaps, the most dangerous of British plants; its fruit is tempting in appearance, sweetish, and without any remarkable or repulsive flavour, so that children have often eaten it, and even half a berry is said to have proved fatal. It occasions a deep and deadly stupor. A draught of vinegar, after mechanically emptying the stomach, and keeping the patient walking to prevent sleep, are the surest means in the case of this, as well as other narcotics, to cure their ill effects. The active ingredient is found to be a peculiar alkali, to which the name *Atropia* has been given. It is not corrosive, but acts solely upon the nerves, so that emetics do not readily take effect. A decoction or extract of the leaves or root, either taken internally or applied externally, has been recommended in various disorders; but the sufferings of the patient under ever so small a dose are dreadful.

GENUS CXIX. SOLANUM. *Nightshade.*

Nat. Order. SOLANEÆ.

GEN. CHAR. *Corolla* wheel-shaped. *Anthers* slightly connected, opening by 2 pores at the top. *Calyx* inferior, 5-toothed or 5—10-cleft. *Berry* 2-celled.

Slightly shrubby or herbaceous plants, often seeking support, frequently thorny. The leaves alternate or scattered, very various in form, generally on footstalks. The flowers lateral, often in clusters. Many of the species are narcotic poisons, but the berries of several, and the tuberous roots of others, are used for food; the common Potatoe being an example of the latter.

SOLANUM DULCAMARA. *Woody Nightshade.* TAB. **318.**

Stem shrubby, requiring support, without thorns. Upper leaves hastate; the lower heart-shaped. Flowers in clusters, opposite the leaves, drooping.

Solanum Dulcamara, *E. B.* 565. *Smith* I. 317. *Lindley* 182. *Hooker* 94. *ed.* 2. 109.

A native of hedges and shady places where the soil is moist, climbing to the height of several feet. The flowers commence their appearance in June, soon after which time a copious succession, accompanied with the showy but bitter and poisonous fruit, decorate the shrubs that support them from the ground. The young branches or the root employed in a decoction are much celebrated by some practitioners in cases where sudorifics are useful: but this medicine is to be cautiously administered, and in small doses, as it is liable to produce vomiting, convulsions, and delirium. It is also given in powder, or the extract is employed. Grown in warm situations its action is most powerful.

SOLANUM NIGRUM. *Garden Nightshade.* TAB. **319.**

Stem herbaceous, without thorns. Leaves ovate, bluntly toothed and waved. Umbels of flowers lateral, drooping.

Solanum nigrum, *E. B.* 566. *Smith* I. 318. *Lindley* 182. *Hooker* 94. *ed.* 2. 109.

Common everywhere in cultivated as well as on waste ground, flowering from June to September. The root is annual, much branched. In its narcotic, diuretic, and sudorific properties it resembles the *Dulcamara,* and is to be used with equal caution, 3 grains of the dried leaf being amply sufficient for a dose.

GENUS CXX. ERYTHRÆA. *Centaury.*

Nat. Order. GENTIANEÆ.

GEN. CHAR. *Corolla* salver-shaped, its tube long. *Anthers* finally twisted. *Style* straight. *Calyx* 5-cleft. *Capsule* long, narrow, imperfectly 2-celled.

Small, smooth, herbaceous plants, whose roots die as soon as the seed is ripened, which is commonly in the first year. The leaves and branches are opposite, the stem is square, and the whole herb bitter. It is distinguished from *Chironia*, with which genus the British species have been arranged, by the proportions of the corolla, the long, almost linear, form of the capsule, which has no separate partition, and the straight style. The genuine *Chironiæ* are, moreover, shrubby. The British plants, now considered as 4 species, were formerly only admitted as varieties; one of them at least retains its characters under cultivation from seeds.

ERYTHRÆA CENTAURIUM. *Common Centaury.* TAB. **320**.

Stem nearly simple, elongated. Leaves ovato-lanceolate, 3-ribbed. Flowers loosely corymbose, nearly sessile. Calyx half as long as the tube of the corolla.

Chironia Centaurium, *E. B.* 417. Erythræa Centaurium, *Smith* I. 320. *Lindley* 178. *Hooker* 92. *ed.* 2. 107.

A frequent inhabitant of dry gravelly or chalky pastures, scarcely to be cultivated in a manured soil. Its flowers, produced in the latter part of summer, open only in the sunshine, and close against rain and as soon as gathered. Root annual, stem about a foot high. The herb is very bitter, and well known among rustic practitioners as a stomachic by the name of Lesser Centaury.

ERYTHRÆA LITTORALIS. *Narrow-leaved Tufted Centaury.* TAB. **321**.

Stem simple. Leaves linear-obovate, 3-ribbed. Flowers densely corymbose, nearly sessile. Calyx as long as the tube of the corolla.

Chironia littoralis (Dwarf Tufted Centaury), *E. B.* 2305. Erythræa littoralis, *Smith* I. 320. *Lindley* 178. *Hooker* 92. *ed.* 2. 107.

This grows on various parts of the sea-coast. It is by no means constant in its characters.

ERYTHRÆA LATIFOLIA. *Broad-leaved Tufted Centaury.*

Stem branched, short. Leaves broadly elliptical, with 5 or 7 ribs. Flowers in dense, forked tufts, nearly sessile. Calyx as long as the tube of the corolla.

Erythræa latifolia, *E. B. Supp.* 2719. *Smith* I. 321. *Lindley* 178. *Hooker* 93. *ed.* 2. 108.

This Tufted Centaury has been found on the sea-coast north of Liverpool; near Holyhead; in the county of Down, Ireland; and on the island of Staffa. It is sometimes biennial, at least in a garden-pot, and retains its distinguishing marks when grown from seed, which it produces in abundance.

ERYTHRÆA PULCHELLA. *Dwarf Branched Centaury.* TAB. **322**.

Stem branched, short. Leaves ovate, with 3 or 5 ribs. Flowers loosely corymbose, stalked. Calyx above half as long as the tube.

Chironia pulchella, *E. B.* 458. *Smith* I. 322. *Lindley* 178. *Hooker* 92. *ed.* 2. 107.

This, like the other dwarf species, grows on sandy ground near the sea, but sometimes it occurs inland, as on Hinton Moor in Cambridgeshire. It appears to be annual, flowering in September. This and both the other dwarf species vary much in the length of the stem, often resembling starved plants of *E. Centaurium*: the characters taken from the leaves appear to be the most constant.

GENUS CXXI. SAMOLUS. *Brook-weed.*

Nat. Order. PRIMULACEÆ?

GEN. CHAR. *Corolla* salver-shaped, 5-cleft, with 5 intermediate scales. *Calyx* inferior, 5-toothed, its tube investing half the capsule. *Capsule* of 1 cell, with a central, globose, receptacle, opening by 5 recurving valves. *Seeds* numerous.

Rather succulent marsh or aquatic plants, with entire alternate leaves and elongated clusters of small flowers, accompanied by bracteas. No medicinal properties have been found to exist in them. A large portion of the capsule being closely embraced by, or in fact united to, the tube of the calyx, it has been variously described as inferior and superior: even Sir J. E. Smith, who insists that it is "surely to be reckoned superior," places the genus in the section which he defines to have the "flowers monopetalous, superior."

SAMOLUS VALERANDI. *Common Brook-weed.* TAB. **323**.

Leaves blunt. Cluster many-flowered. A bractea in the middle of each flower-stalk.

Samolus Valerandi, *E. B.* 703. *Smith* I. 323. *Lindley* 185. *Hooker* 98. *ed.* 2. 112.

The Water Pimpernel, as this plant is sometimes called, is found in almost every quarter of the globe and under very different latitudes. It may be observed that this circumstance, however uncommon with plants as well as annuals in general, happens to several aquatics This plant is not very common in Britain, but it is found in several places, chiefly in clear watery, boggy spots, upon a gravelly soil, flowering in July. It is perennial, and grows about a foot high.

GENUS CXXII. LONICERA. *Honeysuckle.*

Nat. Order. CAPRIFOLIÆ.

GEN. CHAR. *Corolla* of 1 petal, irregular. *Calyx* superior, of 5 teeth, small. *Berry* of 1 or more cells. *Seeds* many.

Slender shrubs, with opposite leaves and branches; the stems in some species twining up other shrubs and trees. The fruit is not eatable.

LONICERA CAPRIFOLIUM. *Pale Perfoliate Honeysuckle.* TAB. **324.**

Flowers ringent, whorled, terminal. Leaves deciduous, the upper ones confluent and perfoliate.

Lonicera Caprifolium, *E. B.* 799. *Smith* I. 325. *Hooker* 103. *ed.* 2. 116. Caprifolium perfoliatum, *Lindley* 131.

This rare British plant may have been overlooked as one of the many varieties of the Common Honeysuckle. The fragrant flowers are in perfection through May or June. It is very commonly cultivated.

LONICERA PERICLYMENUM. *Common Honeysuckle.* TAB. **325.**

Flowers ringent, in terminal imbricated heads. Leaves deciduous, all separate.

Lonicera Periclymenum, *E. B.* 800. *Smith* I. 326. *Hooker* 103. *ed.* 2. 116. Caprifolium Periclymenum, *Lindley* 131. (Woodbine.)

An universal favourite which decorates our hedges abundantly, and perfumes the air delightfully in an evening after rain. The stem climbs by twisting to a considerable height upon trees and bushes. There occurs in gardens a variety with sinuated and generally variegated leaves, called the Oak-leaved, besides several varieties differing in the colour of the flower and smoothness of the leaves. They all flower most plentifully in June and July.

LONICERA XYLOSTEUM. *Upright Honeysuckle.* TAB. **326.**

Flower-stalks 2-flowered. Berries distinct. Leaves entire, downy.

Lonicera Xylosteum, *E. B.* 916. *Smith* I. 326. *Lindley* 132. *Hooker* 103. *ed.* 2. 117.

Probably this has escaped from gardens; only two places are named where it has been found wild, viz. under the Roman Wall near Shewing-Sheels in Northumberland, and in a coppice, called the Hachetts, to the east of Houghton Bridge, 4 miles from Arundel. The stem is upright, bushy, very much branched. The scentless flowers, which appear in June, are by no means showy; it is, however, a favourite shrub in gardens. The berries are of a bright scarlet, and contain 6 or more seeds each.

Genus CXXIII. IMPATIENS. *Balsam.*

Nat. Order. Balsamineæ.

Gen. Char. *Calyx* inferior, 2-leaved, deciduous. *Corolla* irregular, of 4 petals; the lateral ones interior, 2-lobed; the lowermost nectariferous, cucullate, with a spur. *Anthers* cohering. *Capsule* of 5 elastic valves.

Succulent but thin-leaved annual plants. The leaves alternate, simple. The flowers axillary. The stem thickened at the joints, semitransparent, succulent, drooping much when not freely supplied with water, but quickly reviving. The capsule is the most remarkable part; it consists of a central angular column, surrounded by 5 elastic valves, so weakly attached at the base when ripe that they spring from it upon the slightest touch, at the same time curling up and scattering the few seeds they previously inclosed. The seeds so scattered will remain in the ground and certainly grow next spring, but if collected and allowed to dry before they are sown they fail to vegetate. In various species the early flowers are composed of little else than the pistils. The reverse happens in *Viola*, *Oxalis*, and some other genera, whose late flowers are those which are devoid of petals: they all, nevertheless, produce perfect seeds.

IMPATIENS Noli-me-tangere. *Yellow Balsam.* Tab. **327**.

Flower-stalks solitary, many-flowered. Lateral petals larger than the nectariferous one, the curvature of whose spur expands. Leaves narrow, ovate, squarish toward the base, serrated.

Impatiens Noli-me-tangere, *E. B.* 937. *Smith* I. 299. *Lindley* 60. *Hooker* 105. *ed.* 2. 118. (Touch-me-not.)

Ray mentions this elegant and curious plant as a native of several places in Westmoreland, Yorkshire, and Wales. It still grows plentifully about the north end of Winandermere in watery spots. The quick evaporation of their fluids causes the flowers and even the leaves to wither so rapidly that our figure was necessarily drawn from a garden specimen, which, however, agrees in every respect with the wild plant of Winandermere. The root is formed of branched and fleshy fibres, spreading horizontally from the lower shortened joints of the stem, even from parts above ground if they are kept moist. The erect stem is round, smooth, and branched, about 2 feet high. It flowers in July and August. Ray says it is dangerously diuretic.

IMPATIENS FULVA. *Tawny-flowered Balsam.*

Peduncle solitary, about 4-flowered. Lateral petals smaller than the nectariferous one, whose spur is closely recurved. Leaves ovate, tapering to the base, their edges toothed with reflected glands. Branches ascending.

Impatiens fulva, *E. B. Supp.* 2794.

This plant, hitherto regarded as exclusively American, is found on the banks of the river Wey in Surrey, and of several of its tributary streams. However it may have been established there, it can now scarcely be refused a place in the British Flora. It bears a general resemblance to the Yellow Balsam, but has much smaller and deeper-coloured flowers. The glaucous leaves are broader and more regularly tapering to each extremity, and the emarginate spur of the flower is bent close, not simply recurved. We are not informed whether this or the *I. Noli-me-tangere* occurs in the other parts of Britain where the Touch-me-not has been recorded to grow, the two having been confounded. One nearly allied to this was found near Bristol: it differs principally in having spreading branches, and slightly in a few other points. The leaves of both are stiffly deflected at their junction with their petioles in the evening, which is probably the case in all the species.

GENUS CXXIV. VIOLA. *Violet.*

Nat. Order. VIOLARIEÆ.

GEN. CHAR. *Calyx* of 5 leaves, each extended at the base. *Petals* 5, unequal, the lowermost spurred behind. *Anthers* slightly cohering. *Capsule* superior, of 1 cell, with 3 valves.

A genus of small herbaceous plants, generally admired and well known by the names Violet, Heart's-ease, and Pansy. They all have alternate leaves with stipules at their bases, and fibrous either annual or perennial roots. They may be divided into two sections by their stipules, in some being membranous, in others leafy.

VIOLA HIRTA. *Hairy Violet.* TAB. **328.**

Stem very short. Leaves heart-shaped, rough with hairs, as well as their footstalks and the capsules. Segments of the calyx obtuse. A hairy line in the lateral petals. Bracteas below the middle of the flower-stalk. Stipules membranous.

Viola hirta, *E. B.* 894. *Smith* I. 301. *Lindley* 35. *Hooker* 105. *ed.* 2. 118.

The Hairy Violet is perennial: it occurs only on a chalky or limestone soil, flowering in April or May. The flowers are pale, small, and scentless, and the bracteas are placed below the middle of the flower-stalks; these features help to distinguish it from the Sweet Violet.

VIOLA ODORATA. *Sweet Violet.* TAB. **329.**

Stem very short. Scions creeping. Leaves heart-shaped and, with their footstalks, nearly smooth. Segments of the calyx obtuse. A hairy line in the lateral petals. Bracteas above the middle of the flower-stalk. Stipules membranous.

Viola odorata, *E. B.* 619. *Smith* I. 301. *Lindley* 35. *Hooker* 106. *ed.* 2. 118.

The Violet, so justly esteemed for its delightful fragrance, is, like many other desirable plants, frequently found wild. In England it is abundant, not uncommonly varying to white, but it is rare in Scotland. A double variety obtained by florists has a richer scent. The long prostrate scions seldom produce flowers until the second year, when flowers with petals are raised upon upright stalks in March and April, but are of short duration; they are followed by a long succession without petals upon stalks which bend to the ground, and there ripen their seeds. This is the case with several other species. At the same time the leaves greatly enlarge. A syrup made from the petals is a gentle laxative and, while it retains its colour, a delicate test for free acids and alkalies. The Sorbet of the Turks is also said to be prepared from them with sugar.

VIOLA PALUSTRIS. *Marsh Violet.* TAB. **330.**

Stem very short. Scions none. Leaves kidney-shaped, smooth. Segments of the calyx obtuse. An obscure hairy line in the lateral petals. Bracteas near the middle of the flower-stalk. Stipules membranous.

Viola palustris, *E. B.* 444. *Smith* I. 302. *Lindley* 35. *Hooker* 106. *ed.* 2. 119.

On the moist parts of sandy turfy heaths, more frequent in Scotland and the North of England than in the South. The root is perennial and creeping. The inodorous flowers open in April or May.

VIOLA CANINA. *Dog's Violet.* TAB. **331.**

Stem ascending, channelled. Leaves oblong-heart-shaped. Calyx acute. Bracteas awl-shaped, entire. Stipules membranous, fringed.

Viola canina, *E. B.* 620. *Smith* I. 303. *Lindley* 35. *Hooker* 106. *ed.* 2. 119.

After the perfect flowers of the Sweet Violet are gone, every copse, heath, and shady dell, and even the clefts of rocks upon mountains at considerable elevations, are decorated for two or three months with the paler scentless flowers of this species. The whole herb is extremely variable in size, and the leaves in form. We are almost persuaded that the *V. flavicornis* and *V. lactea* are only varieties of it.

VIOLA FLAVICORNIS. *Dwarf Yellow-spurred Violet.*

Stem ascending, woody, somewhat angular, much branched. Leaves heart-shaped, coriaceous, smooth, and even. Bracteas and stipules membranous, fringed. Calyx-leaves lanceolate.

Viola flavicornis, *E. B. Supp.* 2736. *Smith* I. 304. *Lindley* 36. *Hooker* 107. *ed.* 2. 119.

This little Violet is not uncommon on the exposed parts of heaths where the soil is poor, while the *V. canina* grows on a richer soil in more sheltered situations. It differs principally from the *V. canina* in size, and the short, blunt, yellowish spur to the flower; but it may be further distinguished by the short, firm, rigid, very even, heart-shaped, obtuse leaves, on equally short footstalks, and by the deeper colour of them and the flower.

VIOLA LACTEA. *Cream-coloured Violet.* TAB. **332.**

Stem ascending, round. Leaves ovato-lanceolate, smooth. Stipules and bracteas membranous, lanceolate, toothed. Calyx-leaves acuminate.

Viola lactea, *E. B.* 445. *Smith* I. 303. *Lindley* 35. *Hooker* 106. *ed.* 2. 119.

The root from which the figure of this was taken was gathered on the wolds near Tunbridge Wells, and flowered in a garden. It has also been found by the sides of bogs in various places.

VIOLA TRICOLOR. *Pansy Violet.* TAB. **333.**

Stems angular, diffuse. Leaves deeply crenate, oblong. Stipules leaf-like, pinnatifid, the central lobe toothed. Petals longer than the calyx. Germen oval. Root annual.

Viola tricolor, *E. B.* 1287. *Smith* I. 305. *Lindley* 36. *Hooker* 107. *ed.* 2. 119.

The Wild Pansy or, in familiar language, Heart's-ease, the origin of all our annual garden varieties, is very common in corn-fields, and flowers from May to September.

VIOLA ARVENSIS. *Corn Pansy.*

Stem angular, diffuse. Leaves deeply crenate, fringed; the lower ones nearly heart-shaped, the upper ones oblong. Stipules leaf-like, pinnatifid, the central lobe toothed. Petals shorter than the calyx. Capsule nearly globular. Root annual.

Viola arvensis, *E. B. Supp.* 2712. Viola tricolor (β.), *Smith* I. 305. *Lindley* 36.

This Pansy also is common in corn-fields, flowering from May to September. The essential differences of this species from the Wild or Garden Pansy are, petals shorter than the calyx, germen obtuse, nearly globular. It may also be readily distinguished by the pale green colour of the plant, the more erect stem, the leaves more frequently heart-shaped, the rough calyx-leaves, and the small yellowish white concave flowers, the lower petal marked with only 5 black streaks.

VIOLA LUTEA. *Yellow Mountain Pansy.* TAB. **334.**

Stem triangular, unbranched. Leaves ovato-oblong, crenated, ciliated. Stipules leaf-like, palmated, the lobes obtuse, the central one entire. Bracteas minute. Spur the length of the calyx. Root perennial.

Viola lutea, *E. B.* 721. *Smith* I. 306. *Lindley* 36. *Hooker* 107. *ed.* 2. 120.

This Violet, which a superficial botanist might pass by as a variety of the Wild Pansy, differs widely from that in its place of growth as well as in the characters above enumerated. It is found only in grassy mountainous pastures, flowering from May to September. It is plentiful in the North of England, the wildest parts of Wales, and in Scotland. Sometimes the petals are all yellow; at other times the three lower ones only, and often all are of a deep violet colour. This should appear to be the origin of some of the garden perennial *Pansies.*

VIOLA Curtisii. *Yellow Sea Pansy.*

Stem decumbent, angular, rough, branched at the base. Leaves oblong, crenated, naked. Leaf-stalks hairy. Stipules leaf-like, palmated, the lobes acuminated, all entire, ciliated. Bracteas minute. Spur the length of the calyx.

Viola Curtisii, *E. B. Supp.* 2693. (V. littoralis of Curtis's MSS.)

Named in commemoration of the accurate and discriminating author of the *Flora Londinensis,* who first discovered it on Braunton-boroughs in Devonshire growing in great abundance. It also occurs in Wales and Ireland. In the form of the plant and size of the flowers this is intermediate between *V. tricolor* and *V. lutea.* The stipules, although they vary in form in different parts of the same plant, still afford clear marks which will help to discriminate the species. In the present one the nerves are strongly marked on the backs of the stipules, whose lobes are lanceolate, entire, and acuminated. Probably this has found its way into gardens along with the *V. lutea,* if, indeed, it be not the one, until lately, most generally cultivated.

Genus CXXV. RHAMNUS. *Buckthorn.*

Nat. Order. Rhamneæ.

Gen. Char. *Corolla* 4 or 5 petals, opposite the stamens. *Calyx* funnel-shaped, inferior. *Berry* of several 1-seeded cells.

Small shrubs, with alternate simple, stalked leaves, which have deciduous stipules. Branches sometimes ending in spines. The small clustered flowers are generally pale green, and are succeeded by black round berries. The pulp of the berries, preserved in syrup, is a useful purgative medicine.

RHAMNUS catharticus. *Common Buckthorn.* Tab. **335.**

Spines terminal. Flowers 4-cleft, diœcious. Leaves ovate, serrated. Stem upright. Seeds 4.

Rhamnus catharticus, *E. B.* 1629. *Smith* I. 327. *Lindley* 73. *Hooker* 104. *ed.* 2. 117.

Not rare in hedges, where it produces flowers in May or June, and ripe fruit in September. It forms a hard, rigid, spreading shrub, with alternate or nearly opposite branches, each of which is tipped with a strong spine. Sometimes the stamens and pistil are perfect in the same flower. The berries are nauseous and well known for their purgative quality; in an unripe state they dye yellow, but are esteemed far inferior to those of *R. infectorius* brought from the Levant as French berries. The bark affords a green dye.

RHAMNUS Frangula. *Alder Buckthorn.* Tab. **336.**

Thorns none. Flowers all perfect. Leaves smooth, entire. Seeds 2.

Rhamnus Frangula, *E. B.* 250. *Smith* I. 328. *Lindley* 73. *Hooker* 104. *ed.* 2. 117.

This shrub occurs in woods and thickets, occasionally in England, but rarely in Scotland. It flowers in May, and by the end of July the berries are ripe. The stem grows 3 or 4 feet high, with numerous forked branches. The berries are said to be sometimes mixed in commerce with those of the Common Buckthorn; they may be distinguished by the number of the seeds, but as they are similar in their properties it is of little importance.

Genus CXXVI. EUONYMUS. *Spindle-tree.*

Nat. Order. Celastrineæ.

Gen. Char. *Petals* 4 or 5. *Calyx* inferior, flat, 4- or 5-cleft. *Capsule* with 4 or 5 angles, cells, and seeds. *Seeds* in a fleshy arillus.

Shrubs with, generally, opposite branches, opposite leaves, without stipules, and axillary clusters of flowers. The wood is hard and fine-grained, consequently useful. The fruit is poisonous.

EUONYMUS europæus. *Common Spindle-tree.* Tab. **337.**

Flowers 4-parted throughout. Petals acute. Leaves on short footstalks, serrated. Branches smooth.

Euonymus europæus, *E. B.* 362. *Smith* I. 329. *Lindley* 74. *Hooker* 104. *ed.* 2. 117.

Hedges and thickets in most parts of England and the South of Ireland produce this shrub, but it is seldom found in Scotland or in mountainous countries. The flowers appear early in May. The fruit does not ripen until autumn, when it continues to ornament the hedges long after the leaves are fallen, and is frequently mingled with the evergreens collected for ornament at Christmas time. It is a small shrub with straight spreading branches, which are angular when young, but round and even afterwards. Every part, when bruised, emits a fœtid odour. The leaves, as well as the fruit, are reported to be poisonous; but Withering says, cows, goats, and sheep eat them. The tough wood is used for spindles and skewers, and, as Linnæus observes, makes the best charcoal to draw with.

Genus CXXVII. RIBES. *Currant.*

Nat. Order. Grossularieæ.

Gen. Char *Petals* 5. *Calyx* bell-shaped, its border 5-cleft, bearing the petals and stamens. *Style* cloven. *Berry* with many seeds.

Bushy shrubs. The leaves are alternate, often lobed, and toothed. The flowers are either in elongated bunches or nearly solitary: those species which have solitary flowers have, generally, also prickly stems. The epidermis is deciduous and soon hangs loose about the stem. The well-known fruit is acid and wholesome. It is well worth observing how truly the insertion of the stamens into the calyx, as in the Class *Icosandria*, indicates a wholesome fruit. The fruits of the *Pentandria Monogynia* are generally dangerous, many of them peculiarly fatal. *Ribes* is an exception indicated by the insertion of the stamens, in which, although not in their number, it accords with the *Icosandria*. With this simple guide a traveller in the most unknown wilderness might eat in safety; and thus the tree of the knowledge of nature leads to life.

RIBES rubrum. *Red Currant.* Tab. **338.**

No thorns. Clusters smooth, pendulous. Flowers nearly flat. Petals obcordate.

Ribes rubrum, *E.B.* 1289. *Smith* I. 330. *Lindley* 106. *Hooker* 108. *ed.* 2. 120.

A native of woods in the North of England and Scotland, where the birds seldom allow the berries to ripen. The value of this shrub when cultivated for its fruit is sufficiently well known; the white and pale red varieties are preferred for their sweetness, the full red or wild kind for its grateful acid. The Currant is quite the fruit of a cold climate, thriving very ill in the South of Europe.

RIBES petræum. *Rock Currant.* Tab. **339.**

No thorns. Clusters slightly hairy, in flower erect, in fruit pendent. Petals bluntish. Bracteas shorter than the flower-stalks.

Ribes petræum, *E. B.* 705. *Smith* I. 331. *Lindley* 106. *Hooker* 108. *ed.* 2. 120.

In similar situations with the last this is sometimes to be found. It flowers in May or June, and the fruit is ripe about six weeks later. The little bracteas close to the calyx are more conspicuous in this than in the Red Currant.

RIBES spicatum. *Acid Mountain Currant.* Tab. **340.**

No thorns. Clusters upright. Flowers nearly sessile. Petals oblong. Bracteas shorter than the flowers.

Ribes spicatum, *E. B.* 1290. *Smith* I. 331. *Lindley* 106. *Hooker* 108. *ed.* 2. 120.

A rare species, now only known to grow near Richmond in Yorkshire. Mr. Robson, the discoverer of it, also found it between Piersbridge and Gainford in Durham. It flowers in May.

RIBES ALPINUM. *Tasteless Mountain Currant.* TAB. **341**.

No thorns. Clusters upright both in flower and fruit. Bracteas longer than the flowers. Leaves shining beneath.

Ribes alpinum, *E. B.* 704. *Smith* I. 332. *Lindley* 107. *Hooker* 108. *ed.* 2. 121.

A native of rocky mountainous woods and thickets in the North of England and in Scotland. Well and readily distinguished by the deeply divided leaves and long bracteas. The flowers appear near the end of May, and the fruit is ripe in June.

RIBES NIGRUM. *Black Currant.* TAB. **342**.

No thorns. Clusters hairy, few-flowered, pendulous, with a solitary flower at the base of each. Flowers oblong. Leaves glandulous at the back.

Ribes nigrum, *E. B.* 1291. *Smith* I. 332. *Lindley* 107. *Hooker* 108. *ed.* 2. 121.

The Black Currant naturally grows in swamps and about the banks of rivers. It flowers in May and ripens its fruit in July, but little later than the other more abundantly cultivated species. The leaves have a remarkable, strong smell, of which flavour the fruit so much partakes as to be disagreeable to some persons. A jelly formed of the fruit is highly grateful and a popular and efficacious remedy for sore throats; it is gently laxative.

RIBES GROSSULARIA. *Gooseberry.* TAB. **343**.

Branches arched, with 2 or 3 thorns beneath each leaf. Flowers on separate stalks, with a pair of close bracteas to each. Segments of the calyx reflexed, shorter than the tube. Lobes of the leaves rounded.

Ribes Grossularia, *E. B.* 1292. *Lindley* 107. *Hooker* 108. *ed.* 2. 121.
R. Uva-crispa, Smooth Gooseberry, *E. B.* 2057.

Common in hedges and waste ground, but a doubtful native. It is one of the most wholesome of fruits, and one which the inhabitants of tropical countries would gladly purchase with some of their more luscious productions, but it will only thrive in cool climates. It is observed in the cultivated varieties that what is gained in size is lost in flavour. The smooth-fruited kind is only a variety, and not permanent.

GENUS CXXVIII. HEDERA. *Ivy.*

Nat. Order. CAPRIFOLIACEÆ.

GEN. CHAR. *Calyx* of 5 teeth. *Petals* 5, broadest at the base. *Berry* encompassed with the calyx, containing 5 seeds.

Evergreen shrubs with long climbing branches, which support themselves by roots from their sides. The leaves are alternate, without stipules. The flowers collected into terminal heads and subtended by bracteas.

HEDERA HELIX. *Common Ivy.* TAB. **344**.

Leaves various, some ovate, some cordate, with angular lobes.

Hedera Helix, *E. B.* 1267. *Smith* I. 334. *Lindley* 133. *Hooker* 109. *ed.* 2. 121.

Every one is acquainted with the picturesque Ivy. It is the latest in flowering of all our shrubs, not opening before October. Its berries are ripened the following spring. The whole plant partakes of a peculiar aromatic flavour. From the old stems, when bruised, a very fragrant resin exudes. Mr. Curtis recommends it to be trained into a head as an ornamental standard evergreen, an operation contrary to nature, and which must be tedious. It is much better suited for forming baskets in the flower-garden, and to conceal walls in shady situations.

GENUS CXXIX. ILLECEBRUM. *Knot-grass.*

Nat. Order. ILLECEBREÆ.

GEN. CHAR. *Calyx* of 5 subcucullate, coriaceous segments, inferior. *Corolla* none. *Stamens* 5, with 5 intermediate petal-like scales. *Capsule* of 5 valves. *Seed* 1.

Small herbs. Their leaves are opposite, and have membranous stipules at their bases. The whorled flowers have persistent calices, whose valves are tipped with bristles.

ILLECEBRUM VERTICILLATUM. *Whorled Knot-grass.* TAB. **345**.

Flowers whorled, without bracteas. Stems procumbent.

Illecebrum verticillatum, *E. B.* 895. *Smith* I. 335. *Lindley* 61. *Hooker* 109. *ed.* 2. 122.

No part of Britain, except Cornwall and Devonshire, has been hitherto known to produce this plant, which there grows in boggy places and flowers in July.

GENUS CXXX. GLAUX. *Sea-Milkwort.*

Nat. Order. PRIMULACEÆ?

GEN. CHAR. *Calyx* inferior, bell-shaped, 5-lobed, coloured. *Corolla* none. *Capsule* 1-celled, 5-valved, with 5 seeds.

A fleshy plant, with opposite leaves. The coloured calyx much resembles a corolla.

GLAUX MARITIMA. *Common Sea-Milkwort.* TAB. **346.**

The only species.

Glaux maritima, *E. B.* 13. *Smith* I. 336. *Lindley* 183. *Hooker* 109. *ed.* 2. 121. (Black Saltwort.)

Extremely common in salt marshes. It enlivens large tracts of the dreary and wretched situations where it grows with its pretty flowers, which are produced in great abundance in the summer. The root is perennial and creeping. The whole plant is salt to the taste. Cows eat it.

GENUS CXXXI. THESIUM. *Bastard Toad-flax.*

Nat. Order. SANTALACEÆ.

GEN. CHAR. *Calyx* superior, 5-cleft, persistent. *Corolla* none. *Fruit* dry, containing 1 nut.

Narrow-leaved, rather wiry plants. Leaves without stipules, scattered. Flowers greenish, with bracteas beneath them, in clusters or panicles.

THESIUM LINOPHYLLUM. *Flax-leaved Bastard Toad-flax.* TAB. **347.**

Spike branched. Bracteas in threes. Leaves linear-lanceolate. Tube of the calyx very short.

Thesium linophyllum, *E. B.* 247. *Smith* I. 337. *Lindley* 208. *Hooker* 110. *ed.* 2. 122.

This grows on an elevated chalky soil in the Southern counties of England. The root is perennial. When cultivated, the branched spike becomes panicled and leafy, and the whole plant so luxuriant as to appear almost a distinct species.

ORDER II. DIGYNIA.

GENUS CXXXII. HERNIARIA. *Rupture-wort.*

Nat. Order. ILLECEBREÆ.

GEN. CHAR. *Calyx* in 5 segments, inferior. *Corolla* none. *Stamens* 5 perfect, with 5 abortive filaments alternating with them. *Capsule* covered with the persistent calyx. *Seed* 1.

Small, by no means attractive, shrubby herbs. Leaves opposite and unequal, or alternate and undivided, supplied with membranous stipules. Flowers nearly sessile, with bracteas, clustered in the alæ of the leaves.

HERNIARIA GLABRA. *Smooth Rupture-wort.* TAB. **348.**

Herbaceous, clusters many-flowered. Leaves lanceolate.

Herniaria glabra, *E. B.* 206. *Smith* II. 8. *Lindley* 61. *Hooker* 139. *ed.* 2. 141. H. hirsuta, *E. B.* 1379. *Smith* II. 9. *Lindley* 61. *Hooker* 140. *ed.* 2. 141.

This plant grows about the Lizard Point in Cornwall, and, rarely, in one or two other places in England, in a gravelly soil. The root is perennial. The whole plant is sometimes hairy; other specimens have the edges of the leaves fringed with white bristles, but all other parts smooth. The former of these states has been described as *H. hirsuta,* and is represented as such in the English Botany, but the true *H. hirsuta,* if it be a distinct species, has not been found in Britain.

GENUS CXXXIII. CHENOPODIUM. *Goosefoot.*

Nat. Order. CHENOPODEÆ.

GEN. CHAR. *Calyx* inferior, 5-cleft, persistent, investing the fruit. *Corolla* none. *Seed* solitary, lenticular.

Herbaceous, in general rather succulent plants, often more or less covered with minute unctuous scales, resembling meal. Leaves alternate, flat, and often angular and lobed, or scattered and nearly cylindrical. Flowers small, green, and clustered. Several species will serve as substitutes for spinach, and the black seeds of many afford a large supply of food to small birds. They generally grow in waste manured ground.

CHENOPODIUM FRUTICOSUM. *Shrubby Sea-side Goosefoot.* TAB. **349.**

Erect, shrubby, perennial. Leaves semicylindrical, bluntish. Bracteas 3.

Salsola fruticosa (Shrubby Salt-wort), *E. B.* 635. *Smith* II. 18. Chenopodium fruticosum, *Lindley* 216. *Hooker* 136. *ed.* 2. 138.

This grows on the southern coasts of England, rather rarely. It forms an elegant evergreen shrub, 3 or more feet high, with erect branches, bearing numerous inconspicuous flowers in July and August. It is not unworthy a place in a garden, where it is tolerably hardy, and may be propagated by layers. The seed is more top-shaped than usual in the genus *Chenopodium*. The leaves have an herbaceous flavour, with a slight degree of salt, and some acrimony.

CHENOPODIUM MARITIMUM. *Annual Sea-side Goosefoot.* TAB. **350.**

Stem erect, herbaceous, annual. Leaves semicylindrical, rather pointed. Bracteas 2.

Chenopodium maritimum, *E. B.* 633. *Smith* II. 16. *Lindley* 216. *Hooker* 136. *ed.* 2. 138.

A very frequent plant on the sea-shore, more especially where the soil is muddy, flowering about July and August. The seeds are minutely striated. It is said to be good eating when boiled. The whole plant abounds in an alkaline carbonate, and is one of those indiscriminately collected in the South of Europe for the manufacture of glass.

CHENOPODIUM OLIDUM. *Stinking Goosefoot.* TAB. **351.**

Leaves ovate, somewhat rhomboid, entire. Flowers in dense clustered spikes. Stem diffuse.

Chenopodium olidum, *E. B.* 1034. *Smith* II. 14. *Lindley* 216. *Hooker* 137. *ed.* 2. 138.

Frequent in waste places near London, but more plentiful near the sea-coast among sand or rubbish. It flowers in August. The whole plant is invested with a greasy mealiness, which when touched exhales a most odious and lasting smell like that of stale salt fish. The seed is depressed and dotted.

CHENOPODIUM POLYSPERMUM. *Round-leaved Goosefoot.* TAB. **352.**

Leaves ovate, obtuse, entire. Stem prostrate. Clusters cymose, divaricated, leafless.

Chenopodium polyspermum, *E. B.* 1480. *Smith* II. 15. *Lindley* 216. *Hooker* 137. *ed.* 2. 138.

Found in Cornwall in waste ground, flowering in the latter part of summer. Root annual. It is subject to some variation in the form of the leaves and bunches of flowers. We cannot help, however, suspecting that varieties of the *C. acutifolium* have been taken for it and led to the idea that it is the same species.

CHENOPODIUM ACUTIFOLIUM. *Sharp entire-leaved Goosefoot.* TAB. **353.**

Leaves ovate, acute, entire. Stem erect. Clusters spiked, elongated, erect; the lower ones somewhat cymose, leafy.

Chenopodium acutifolium, *E. B.* 1481. *Smith* II. 15. *Lindley* 216. C. polyspermum, *β*. *Hooker* 137. *ed.* 2. 138.

This plant occurs in fields and waste ground in many parts of England. It varies somewhat in the sharpness of its leaves and form of the clusters, which sometimes are a little cymose, but it is still an erect plant, and in general appearance different from the *C. polyspermum*, which being rare, few English botanists have had opportunities of fairly comparing the varieties.

CHENOPODIUM Bonus Henricus. *Perennial Goosefoot.* Tab. **354**.

Leaves triangular, arrow-shaped, entire. Spikes compound, leafless. Root perennial.

Chenopodium Bonus Henricus, *E. B.* 1033. *Smith* II. 9. (Mercury Goosefoot) *Lindley* 215. *Hooker* 137. *ed.* 2. 139. (Good King Henry, Wild Spinach.)

Fat Hen, as this is provincially called, frequently occurs in waste ground about villages, farm-yards, and cottages. Stem a foot high, spreading at the base, and then erect. It flowers from May to the end of the summer, in which it differs from most of the other British species, which do not flower until late in the autumn. The young herb boiled is a good substitute for spinach, and is in some places cultivated for that purpose.

CHENOPODIUM urbicum. *Upright Goosefoot.* Tab. **355**.

Leaves triangular, toothed. Spikes long, straight, interrupted, approaching the stem, nearly leafless.

Chenopodium urbicum, *E. B.* 717. *Smith* II. 10. *Lindley* 215. *Hooker* 137. *ed.* 2. 139.

Common on dunghills everywhere, especially near towns. It is distinguished from *C. rubrum*, which it much resembles, by its leaves being more truly triangular, not lengthened out at the base, nor so deeply sinuated. The seeds are as large as rape-seed, whereas those of *C. rubrum* are no bigger than small grains of sand. The root is annual, and the flowers appear in August and September.

CHENOPODIUM rubrum. *Red Goosefoot.* Tab. **356**.

Leaves triangular, approaching to rhomboidal, deeply toothed, and somewhat sinuated. Clusters upright, compound, leafy. Flowers crowded. Seeds minute.

Chenopodium rubrum, *E. B.* 1721. *Smith* II. 11. *Lindley* 215. *Hooker* 137. *ed.* 2. 139.

Common on waste, muddy, or manured ground, flowering from August to October. Root annual. Stem from 1 to 3 feet high, branched in a somewhat pyramidal form.

CHENOPODIUM botryodes. *Many-clustered Goosefoot.* Tab. **357**.

Leaves triangular, somewhat toothed; the upper ones bluntish. Spikes upright, compound, rounded, leafy.

Chenopodium botryodes, *E. B.* 2247. *Smith* II. 11. *Lindley* 215. *Hooker* 138. *ed.* 2. 139.

Rare. It was first described in English Botany from specimens gathered in moist sandy ground near Yarmouth in Norfolk by Mr. L. Wigg, who pointed out its distinguishing marks. It has only been found in one or two other places. Its root is annual. The flowers appear in the autumn.

CHENOPODIUM MURALE. *Nettle-leaved Goosefoot.* TAB. **358.**

Leaves ovate, approaching rhomboidal, acute, toothed, shining. Clusters much branched, cymose, leafless.

Chenopodium murale, *E. B.* 1722. *Smith* II. 11. *Lindley* 215. *Hooker* 138. *ed.* 2. 139.

Very abundant on banks and under walls about towns and villages, flowering in August and September. The whole plant is fœtid.

CHENOPODIUM HYBRIDUM. *Maple-leaved Goosefoot.* TAB. **359.**

Leaves heart-shaped, pointed, with broad, angular teeth. Clusters much branched, cymose, divaricated, leafless.

Chenopodium hybridum, *E. B.* 1919. *Smith* II. 12. *Lindley* 215. *Hooker* 138. *ed.* 2. 139.

One of the most uncommon species. It grows in moist, fertile spots near London, Ipswich, Edinburgh, and some other towns. It is an annual of rank growth, a branching, spreading, smooth habit, with slender stems and a fœtid scent, flowering in August.

CHENOPODIUM ALBUM. *White Goosefoot.* TAB. **360.**

Leaves ovate, inclining to rhomboid, jagged, entire towards the base, mealy; upper ones oblong and perfectly entire. Seeds smooth. Spikes leafy.

Chenopodium album, *E. B.* 1723. *Smith* II. 13. *Lindley* 215. *Hooker* 138. *ed.* 2. 140.

The most common of its genus in all kinds of cultivated ground, as well as about dunghills and waste places, flowering throughout the summer and autumn. It is known by the abundance of the mealy scales, which give it a silvery aspect, and render it even more greasy to the feel than its congeners. It is generally esteemed a useless weed, though cattle will feed upon it, and we believe it to be eatable when boiled.

CHENOPODIUM FICIFOLIUM. *Fig-leaved Goosefoot.* TAB. **361.**

Leaves sinuated, somewhat hastate, jagged, entire towards the base; upper ones oblong and perfectly entire. Seed dotted. Spikes leafy.

Chenopodium ficifolium, *E. B.* 1724. *Smith* II. 13. *Lindley* 215. *Hooker* 138. *ed.* 2. 140.

Found in similar situations with the last, but not so generally; it flowers in August. The hastate, sometimes almost 3-lobed, form of the leaf is a conspicuous mark of distinction.

CHENOPODIUM GLAUCUM. *Oak-leaved Goosefoot.* TAB. **362**.

Leaves all oblong, with a deeply waved edge, glaucous and very mealy beneath. Clusters compound, dense, leafless.

Chenopodium glaucum, *E. B.* 1454. *Smith* II. 14. *Lindley* 215. *Hooker* 138. *ed.* 2. 140.

Found in sandy or gravelly ground in several parts of the neighbourhood of London, but not in many other places in England. Like most of the others of the genus it is annual, and flowers in August. It varies from 2 inches to 2 feet in height, according to the moisture of the soil. In rich ground it grows extremely rank, losing much of those contrasted hues of green, red, and glaucous white which render it more elegant than most of its family. The seed is very minutely dotted.

GENUS CXXXIV. BETA. *Beet.*

Nat. Order. CHENOPODEÆ.

GEN. CHAR. *Calyx* 5-cleft, half inferior, persistent. *Corolla* none. *Seed* kidney-shaped, within the fleshy base of the calyx.

Plants nearly related to *Chenopodium*, with the same general structure, but furnished with large fleshy roots, and having the leaves constantly entire and undivided. The common garden Beet, *Beta vulgaris*, is well known as a culinary vegetable, whose red root is highly ornamental in salads. An abundance of good sugar may be extracted from it, but not at so low a price as from the sugar-cane. It has also been converted into a substitute for coffee.

BETA MARITIMA. *Sea Beet.* TAB. **363**.

Stems procumbent. Flowers in pairs. Segments of the calyx with entire keels. Root perennial.

Beta maritima, *E. B.* 285. *Smith* II. 17. *Lindley* 216. *Hooker* 139. *ed.* 2. 140.

A native of the sea-shore in several parts of England and the South of Scotland, more especially in muddy places. Root smaller than that of the garden beet, and white within. The stigmas are very frequently 3, and the seeds also 3 in each flower. The leaves are wholesome food when boiled.

GENUS CXXXV. SALSOLA. *Saltwort.*

Nat. Order. CHENOPODEÆ.

GEN. CHAR. *Calyx* 5-cleft, inferior, its base capsular, persistent. *Fruit* crowned with the membranous lobes of the calyx. *Seed* solitary. *Cotyledon* spiral.

Rigid, alternately branched, sometimes shrubby, sea-side plants. The leaves approaching awl-shaped, are often spinous pointed. The lobes of the calyx have frequently a membranous and pink expansion at the back which crowns the fruit. The several species afford the alkali used for glass- and soap-making in greater abundance than most other coast plants.

SALSOLA KALI. *Prickly Saltwort.* TAB. **364.**

Herbaceous, procumbent. Leaves awl-shaped, spine-pointed, rough. Calyx with a membranous expansion.

Salsola Kali, *E. B.* 634. *Smith* II. 18. *Lindley* 214. *Hooker* 139. *ed.* 2. 140.

Very abundant on all sandy sea-shores, flowering copiously in July. The root is annual, fibrous. The stem very much branched, spreading in all directions, and forming a large round bush, almost inaccessible on account of the numerous sharp, rigid leaves. *Salsola Kali* contributes towards the manufacture of soda, but is not reckoned equal to some other species.

GENUS CXXXVI. ULMUS. *Elm.*

Nat. Order. ULMACEÆ.

GEN. CHAR. *Calyx* 4- or 5-cleft, inferior, persistent. *Corolla* none. *Capsule* membranous, compressed, nearly flat, with 1 seed.

A genus of timber trees, with hard, dark-coloured wood of a porous crooked grain, in consequence of their being of rather a quick growth, and having zigzag branches. The bark is generally rugged when old, sometimes in the young state corky. The leaves are alternate, rough, sharply toothed, unequal at the base and petiolated, and furnished with membranous stipules. The flowers are collected into round bunches, and appear before the leaves early in the spring. They are often 4-cleft with only 4 stamens.

ULMUS CAMPESTRIS. *Common Elm.* TAB. **365.**

Leaves rhomboid-ovate, doubly serrated, rough above, downy beneath. Flowers nearly sessile. Fruit oblong, deeply cloven, naked.

Ulmus campestris, *E. B.* 1886. *Smith* II. 20. *Lindley* 226. *Hooker* 140. *ed.* 2. 141. (Small-leaved Elm.)

Common in scattered woods and hedges in the southern parts of England principally. The flowers are produced on the upper branches of tall trees in April. The wood is hard and tough, and, in common with that of other species, particularly durable in wet situations, whence it is used for coffins. In Norfolk the wood of this species is greatly preferred to any other Elm, and sells for nearly double the price, serving more especially for the naves of wheels.

ULMUS SUBEROSA. *Cork-barked Elm.* TAB. **366.**

Leaves nearly orbicular, doubly and sharply serrated, rough above, pubescent beneath. Flowers on short stalks. Fruit roundish, naked, cloven. Branches spreading. The young bark corky.

Ulmus suberosa, *E. B.* 2161. *Smith* II. 21. *Lindley* 226. *Hooker* 140. *ed.* 2. 141.

A taller tree, with broader and larger leaves than *U. campestris*, and more spreading branches. The bark of a year old is covered with a fine dense cork, in longitudinal ridges, separated by deep fissures. The flowers open in March; the fruit is small and nearly round. It grows in hedges in all parts of England, and there are several cultivated varieties, which are more ornamental than useful.

ULMUS MAJOR. *Dutch Elm.* TAB. **367.**

Leaves ovate, acuminated, unequally and rather bluntly serrated, rough above, slightly pubescent beneath. Flowers nearly sessile. Fruit obovate, naked, slightly cloven. Branches spreading, corky.

Ulmus major, *E. B.* 2542. *Smith* II. 21. *Lindley* 226. *Hooker* 141. *ed.* 2. 142.

Whether this Elm ought to be considered as British is doubtful. It occurs sometimes in hedges. Miller says it was brought from Holland in King William's reign, and being recommended for its quick growth, was a fashionable tree for hedges in gardens: he adds, "the wood is good for nothing, so it is almost banished the country." The branches spread widely in a drooping manner, and their bark is extremely rugged and corky, much more so than in *U. suberosa*. The flowers appear in March. It is possible that this is only a variety of *U. suberosa* obtained by cultivation.

ULMUS MONTANA. *Broad-leaved Elm.* TAB. **368.**

Leaves obovate, pointed, doubly and coarsely serrated, nearly equal at the base. Very rough above, downy beneath. Flowers nearly sessile. Fruit obovate, rather rhomboidal, slightly cloven, naked. Branches drooping, smooth.

Ulmus montana, *E. B.* 1887. *Smith* II. 22. *Lindley* 227. *Hooker* 142. *ed.* 2. 142. (Wych Elm. Wych Hazel.)

Common in woods and hedges throughout Britain, and apparently the only species of Elm wild in Scotland, flowering in March or early in April, and ripening its seed in June, when the leaves are full-grown. The leaves are much larger than in *U. campestris*; the fruit is also larger, and more scariose and hop-like. The tree is large, with spreading, often drooping, and sometimes quite pendulous branches. The wood is soft, and consequently of little value.

ULMUS GLABRA. *Wych Elm.* TAB. **369.**

Leaves ovato-lanceolate, very unequal at the base, doubly and obtusely serrated, smooth. Flowers nearly sessile. Fruit obovate, deeply cloven, naked. Branches drooping, their bark even

Ulmus glabra, *E. B.* 2248. *Smith* II. 23. *Lindley* 227. *Hooker* 141. *ed.* 2. 142. (Smooth-leaved Elm.)

The most abundant species of Elm in some parts of Essex, scarcely to be found elsewhere. It is an elegant tree, with spreading, drooping branches. The leaves are smaller than any other, except *U. campestris*, and the fruit smaller and narrower than even in that. The wood is second in quality only to the common Elm, being harder and less likely to split than that of any other.

WE are not at present acquainted with ULMUS CARPINIFOLIA, *Lindley* 226, nor with ULMUS STRICTA, *Lindley* 227, but we hope to obtain them, and, should they prove good species, to figure them in the Supplement.

GENUS CXXXVII. CUSCUTA. *Dodder.*

Nat. Order. CONVOLVULACEÆ.

GEN. CHAR. *Calyx* 4- or 5-cleft. *Corolla* bell-shaped, 4- or 5-cleft. *Capsule* superior, 2-celled, bursting transversely all round.

Parasitical, thread-like, twining plants, supported by short lateral roots, which draw sustenance from the plants they climb upon. The original root withers away soon after the lateral ones have attached themselves. They have no approach to leaves, except small bracteas at the bases of the aggregated flowers, not even cotyledons. The larger species is sometimes so abundant as to be highly injurious to the farmer among his crops of green fodder, which are much deteriorated by it: early mowing would probably destroy it, as it is annual.

CUSCUTA EUROPÆA. *Greater Dodder.* TAB. **370.**

Flowers nearly sessile, without scales at the bases of the stamens. Stigmas acute.

Cuscuta europæa, *E. B.* 378. *Smith* II. 24. *Lindley* 168. *Hooker* 112. *ed.* 2. 123.

A noxious weed, but fortunately not of very general occurrence. It climbs 2 or more feet high upon thistles, oats, or any plants that are crowded together and will afford it nourishment.

CUSCUTA EPITHYMUM. *Lesser Dodder.* TAB. **371.**

Flowers sessile, with a fringed scale at the base of each stamen. Stigmas pointed.

Cuscuta Epithymum, *E. B.* 55. *Smith* II. 25. *Lindley* 168. *Hooker* 112. *ed.* 2. 124.

Smaller than the last, and growing much less regularly. It prefers heath, thyme, and similar rigid plants in an open situation to grow upon, and is said to be more common than the Greater Dodder.

Genus CXXXVIII. SWERTIA. *Felwort.*

Nat. Order. Gentianeæ.

Gen. Char. *Calyx* 4- or 5-partite. *Corolla* rotate, with a pair of honey-bearing glands at the base of each segment. *Capsule* with 1 cell, of 2 valves. *Seeds* numerous, attached to the edges of the valves.

Elegant herbaceous plants, with smooth stems, alternate, undivided leaves, and either annual or perennial fibrous roots. They are allied to Gentians, and like them contain much of the tonic bitter principle. The name is sometimes spelt as it is sounded, *Swertzia.*

SWERTIA perennis. *Marsh Felwort.* Tab. **372.**

Flowers erect, corymbose. Radical leaves ovate.

Swertia perennis, *E. B.* 1441. *Smith* II. 26. *Lindley* 179. *Hooker* 110. *ed.* 2. 122.

As a native of Britain this fine plant rests on the word of Hudson only, who asserts that Richardson found it in Wales; but there is much ground to suppose some mistake, and we would gladly have omitted it had not all English authors retained it. The stem grows a foot high, from a root composed of long fibres, which are intensely bitter. The plant can scarcely be cultivated in a garden ; it must be planted in black bog earth, and kept covered 5 or 6 inches with water. It is rare on the Alps, its native habitation.

Genus CXXXIX. GENTIANA. *Gentian.*

Nat. Order. Gentianeæ.

Gen. Char. *Calyx* tubular, 5-cleft. *Corolla* tubular at the base, 5-lobed, without glands. *Capsule* superior, of 1 cell, and two valves. *Seeds* many, inserted into the sides of the valves.

A genus of beautiful herbaceous plants. They all have opposite, entire, and undivided leaves. Their flowers are various in form, position, and colour. Most of the species contain much of the bitter principle so useful in medicine: it is most abundant in the roots. Those of *G. lutea* and *G. purpurea* are imported, but *G. Pneumonanthe*, *G. Amarella*, and *G. campestris* are equally good.

GENTIANA Pneumonanthe. *Marsh Gentian.* Tab. **373.**

Flowers on short stalks. Corolla bell-shaped, 5-cleft. Leaves linear.

Gentiana Pneumonanthe, *E. B.* 20. *Smith* II. 27. *Lindley* 178. *Hooker* 111. *ed.* 2. 122. (Calathian Violet.)

This rare Gentian usually prefers a wet turfy soil on heaths, especially in the northern counties of England. After a wet spring it bears from 5 to 7 flowers instead of 2, and the leaves vary from linear to almost spatulate. It flowers in August. The root is perennial.

GENTIANA ACAULIS. *Dwarf Gentian.* TAB. **374.**

Flower solitary. Corolla bell-shaped, 5-cleft, as long as the quadrangular stem. Leaves oblong-lanceolate, acute.

Gentiana acaulis, *E. B.* 1594. *Smith* II. 28. *Lindley* 178. *Hooker* 110. *ed.* 2. 122.

Drawn from the original specimen gathered near Haverford West in South Wales by Mons. de St. Amans, and mentioned in the Annals of Botany, a work which we regret has been discontinued, as its loss to the science of botany in England can scarcely be compensated. We are not satisfied that this flower is a British native. Its great beauty has rendered it common in gardens, and in favourable situations it will run wild. Its natural situation is high on the Alps, where it flowers in June and July. The root is perennial.

GENTIANA VERNA. *Spring Gentian.* TAB. **375.**

Flower solitary. Corolla salver-shaped, 5-cleft, the lobes orbicular, eared at their bases. Leaves clustered, ovate.

Gentiana verna, *E. B.* 493. *Smith* II. 29. *Lindley* 178. *Hooker* 111. *ed.* 2. 123.

This very elegant flower grows in Teesdale Forest, Durham, and has also been found in Ireland. It grieves us to remember that this plant caused the separation of two scientific botanists, who had been partners in their discoveries, until one of them, finding it growing in profusion, was desirous of keeping the treasure to himself. The root is perennial : the flowers come to perfection in April.

GENTIANA NIVALIS. *Small Alpine Gentian.* TAB. **376.**

Corolla funnel-shaped, 5-cleft. The segments of the limb ovate, with 5 small, intermediate, bifid lobes. Angles of the calyx even, acute. Stem bearing several flowers.

Gentiana nivalis, *E. B.* 896. *Smith* II. 29. *Lindley* 178. *Hooker* 111. *ed.* 2. 123.

Truly does this hardy little plant deserve the name of *nivalis*, for on the Alps it is only to be found about the limits of perpetual frost, and in our own country it has been observed nowhere but on the summit of Ben Lawers and of one or two of the highest mountains of Scotland, which are seldom three months in the year without snow. It is annual, flowers in July or August, and quickly ripens its seed.

GENTIANA AMARELLA. *Autumnal Gentian.* TAB. **377.**

Corolla salver-shaped, 5-cleft, bearded in the orifice. Segments of the calyx equal. Stem branched, and bearing flowers to the bottom.

Gentiana Amarella, *E. B.* 236. *Smith* II. 30. *Lindley* 179. *Hooker* 111. *ed.* 2. 123.

Found in grassy pastures above limestone rocks, varying in size according to the degree of moisture, and flowering in August and September. It is generally annual, but it appears that some individuals do not flower until early the second year. Such have been thought a distinct vernal variety.

GENTIANA CAMPESTRIS. *Field Gentian.* TAB. **378.**

Corolla salver-shaped, 4-cleft, bearded in the orifice. Two outer segments very large, ovate.

Gentiana campestris, *E. B.* 237. *Smith* II. 31. *Lindley* 179. *Hooker* 111. *ed.* 2. 123.

The commonest species of British Gentians: it grows in pastures, more particularly towards the sea; nor is it so much confined to a limestone soil as the *G. Amarella.* It is annual, flowering in September and October. Dr. Hooker records that "this particular species is used by the poor in Sweden in lieu of hops."

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END OF THE SECOND VOLUME.

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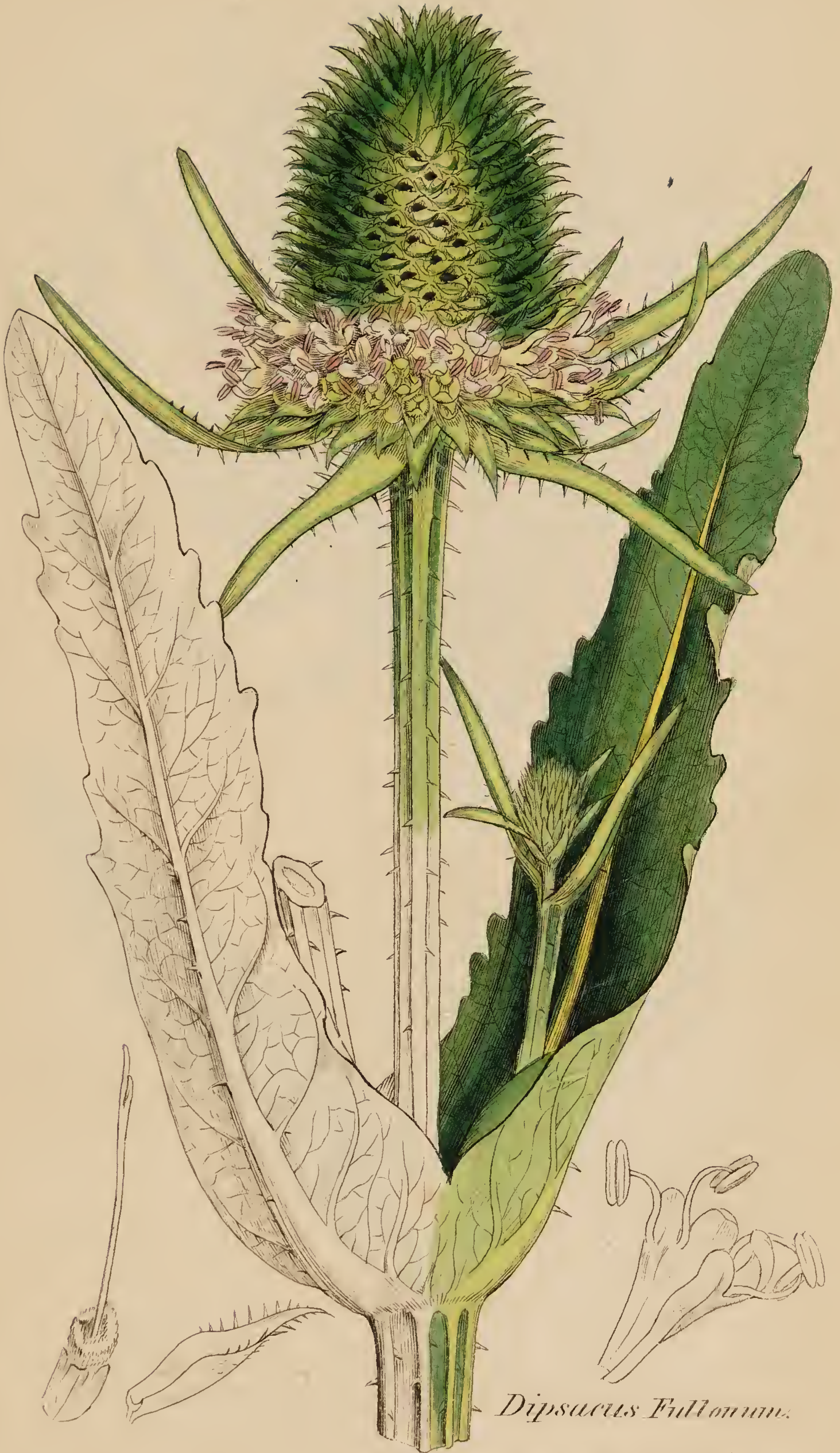

Dipsacus Fullonum.

Nov 1 1809 publish'd by Jas. Sowerby London

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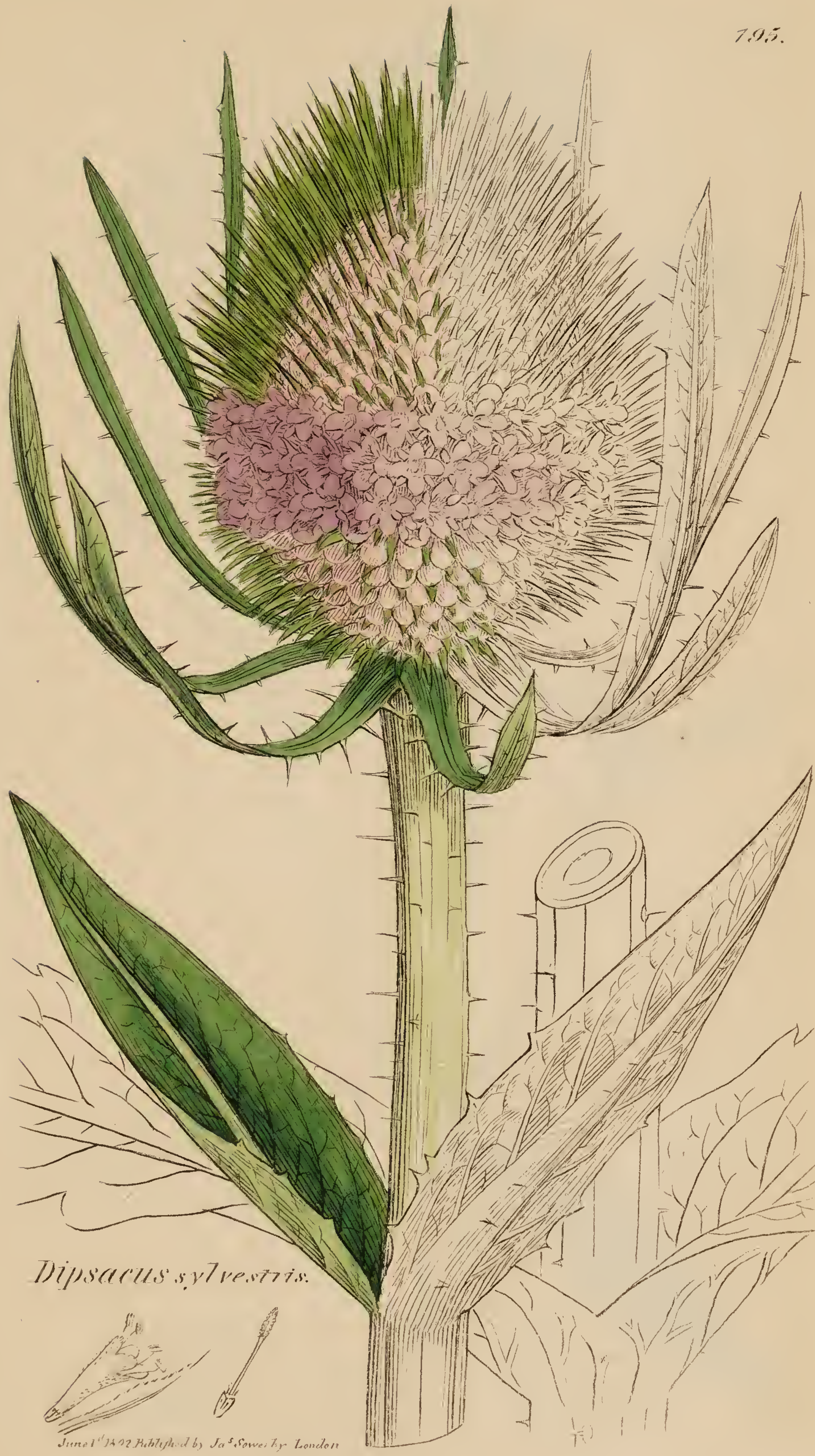

Dipsacus sylvestris.

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877

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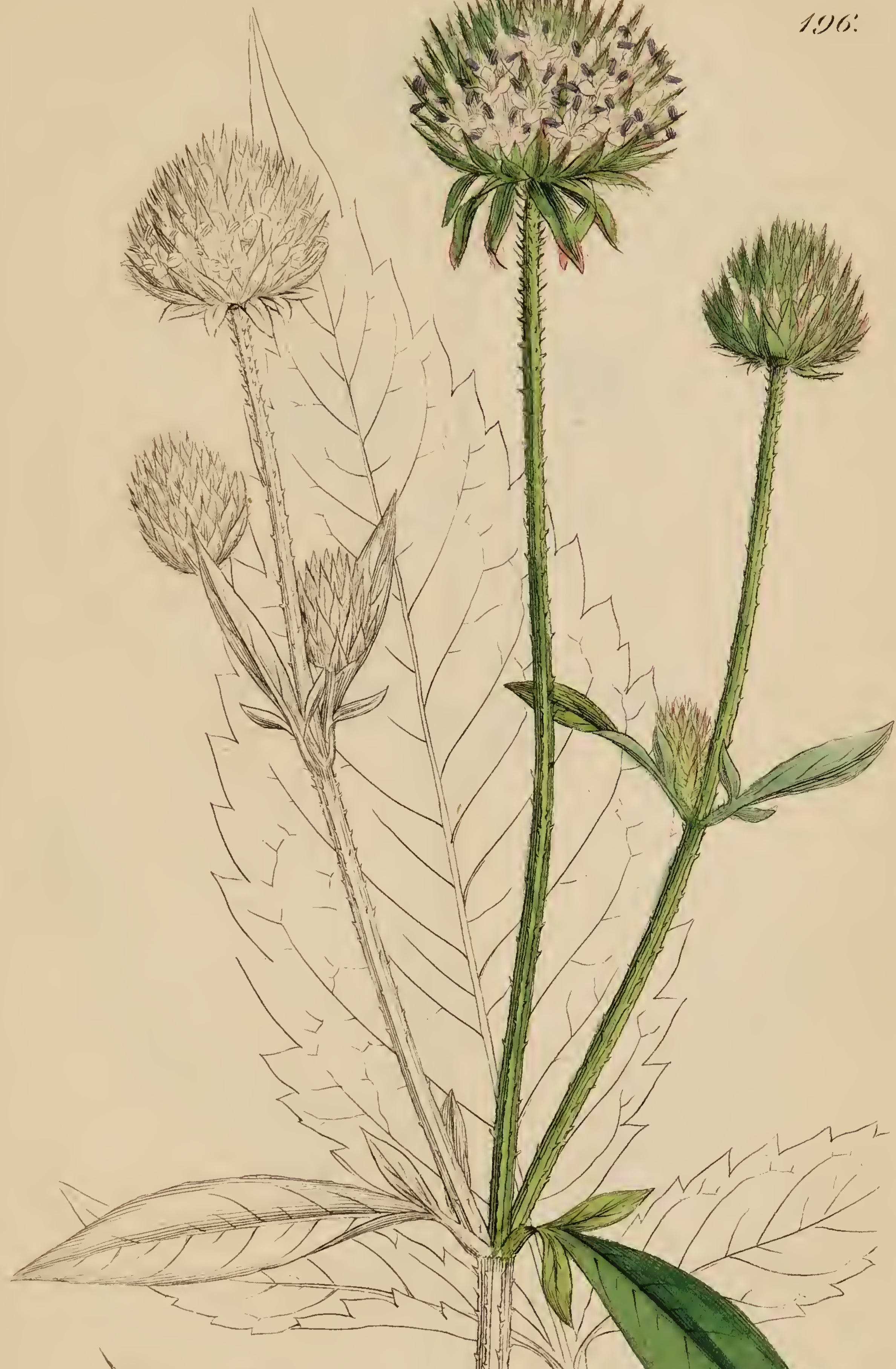

Dipsacus pilosus.

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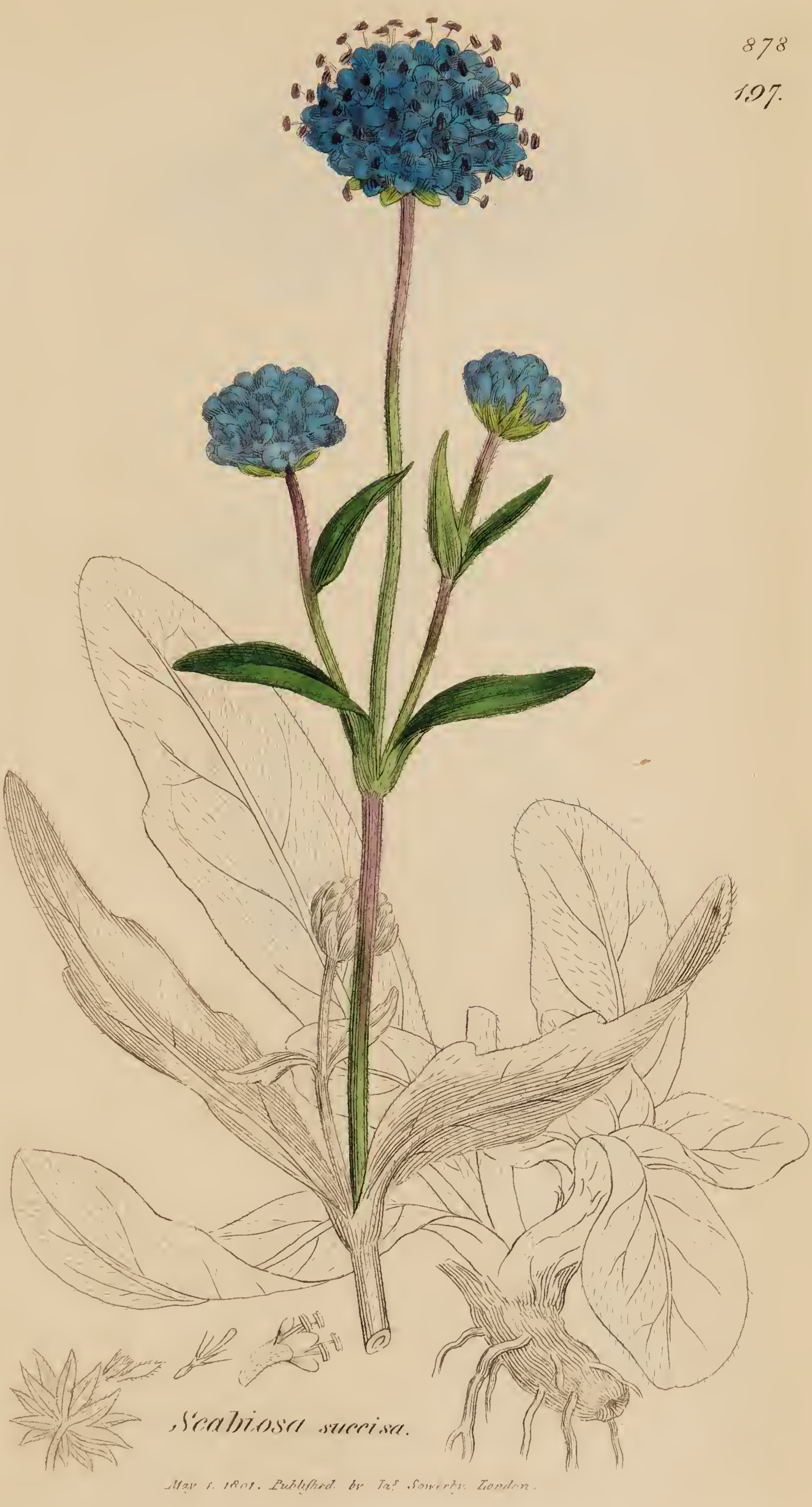

Scabiosa succisa.

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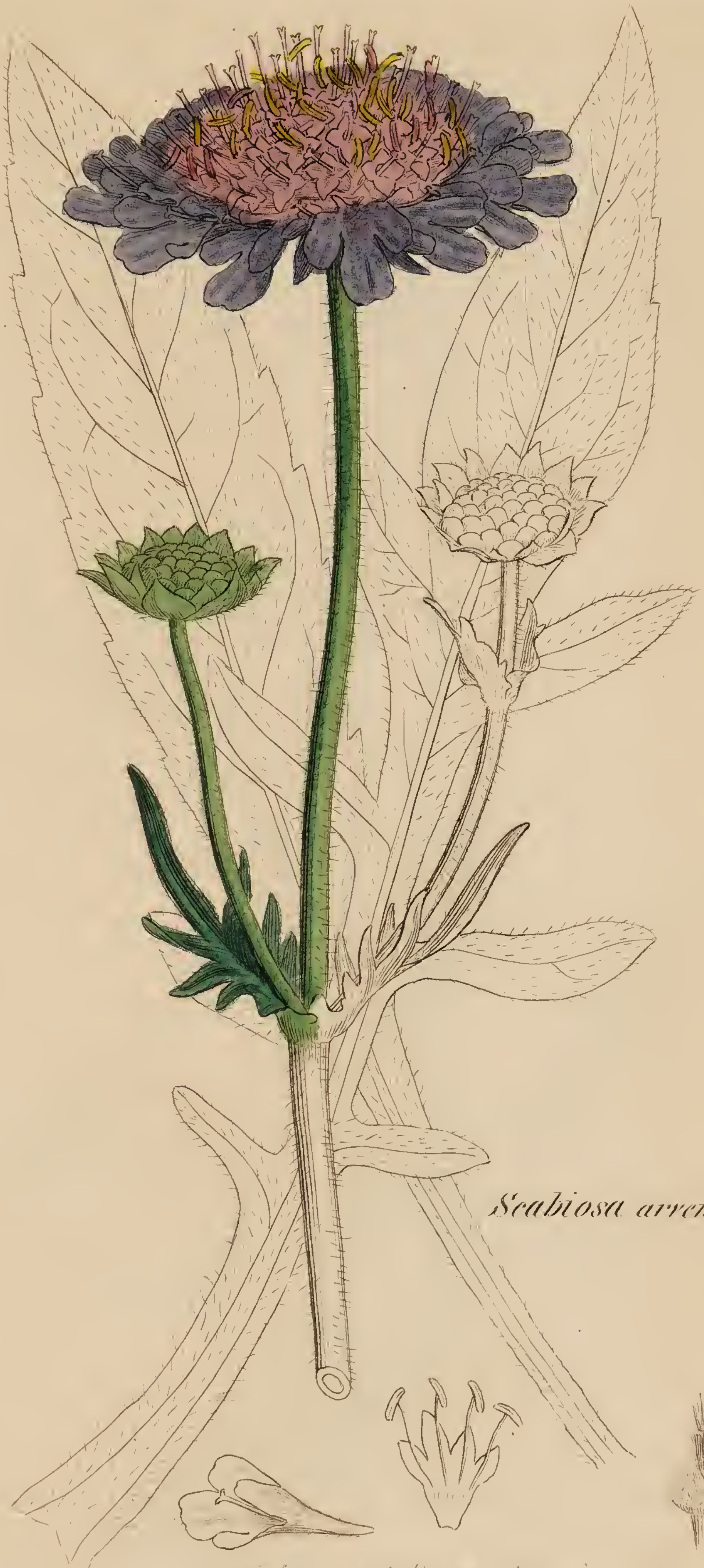

Scabiosa arvensis.

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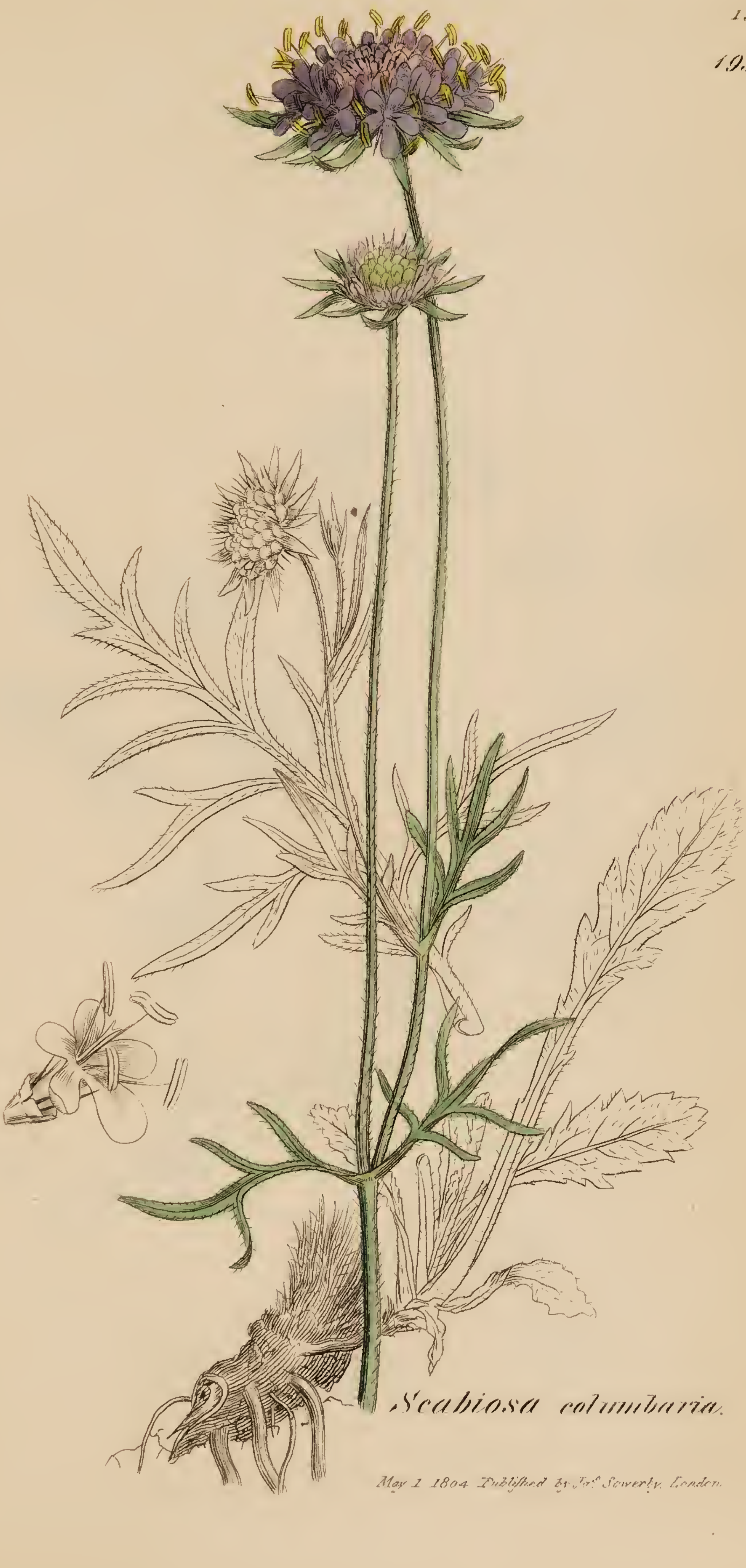

Scabiosa columbaria.

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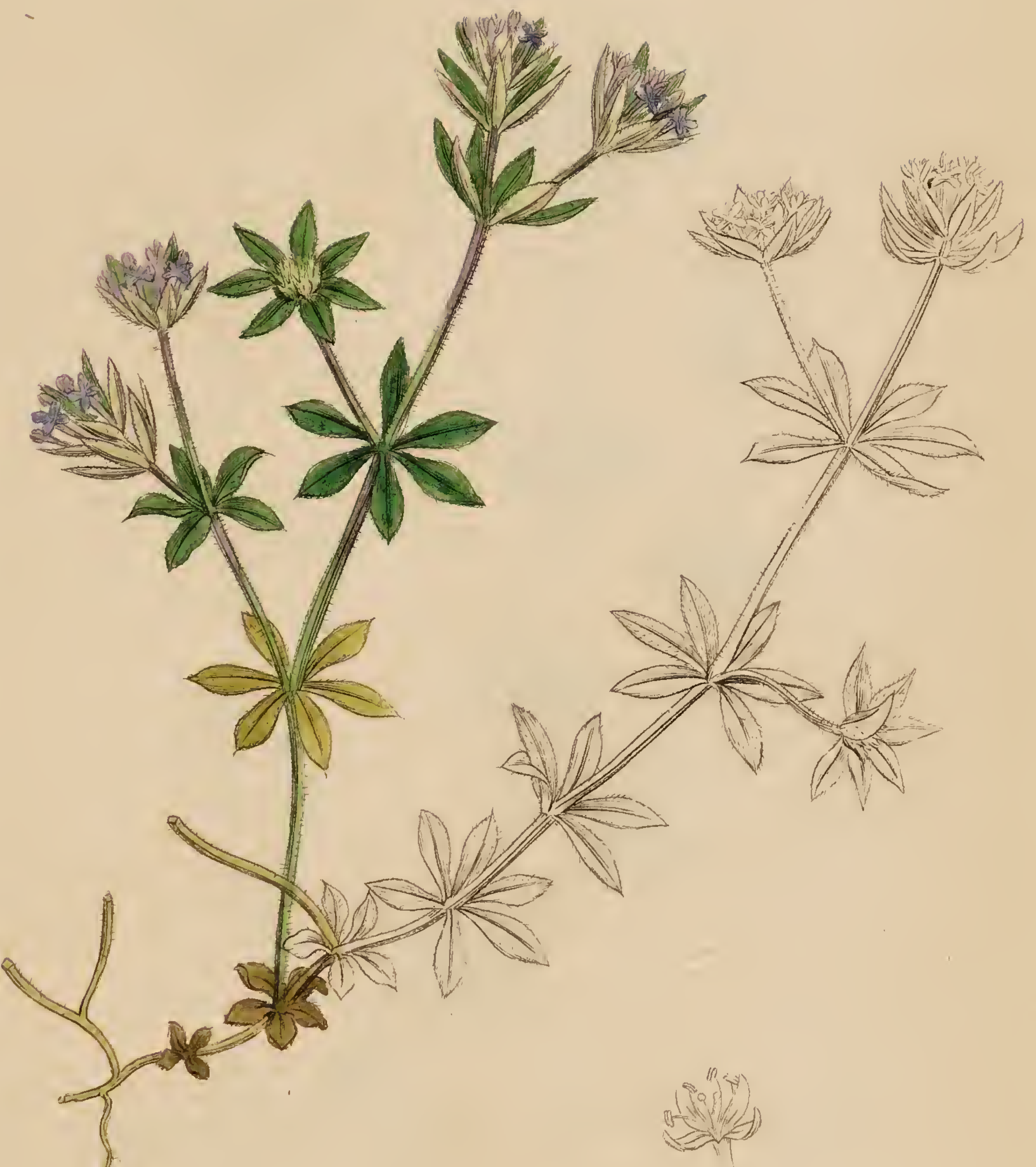

Sherardia arvensis.

755

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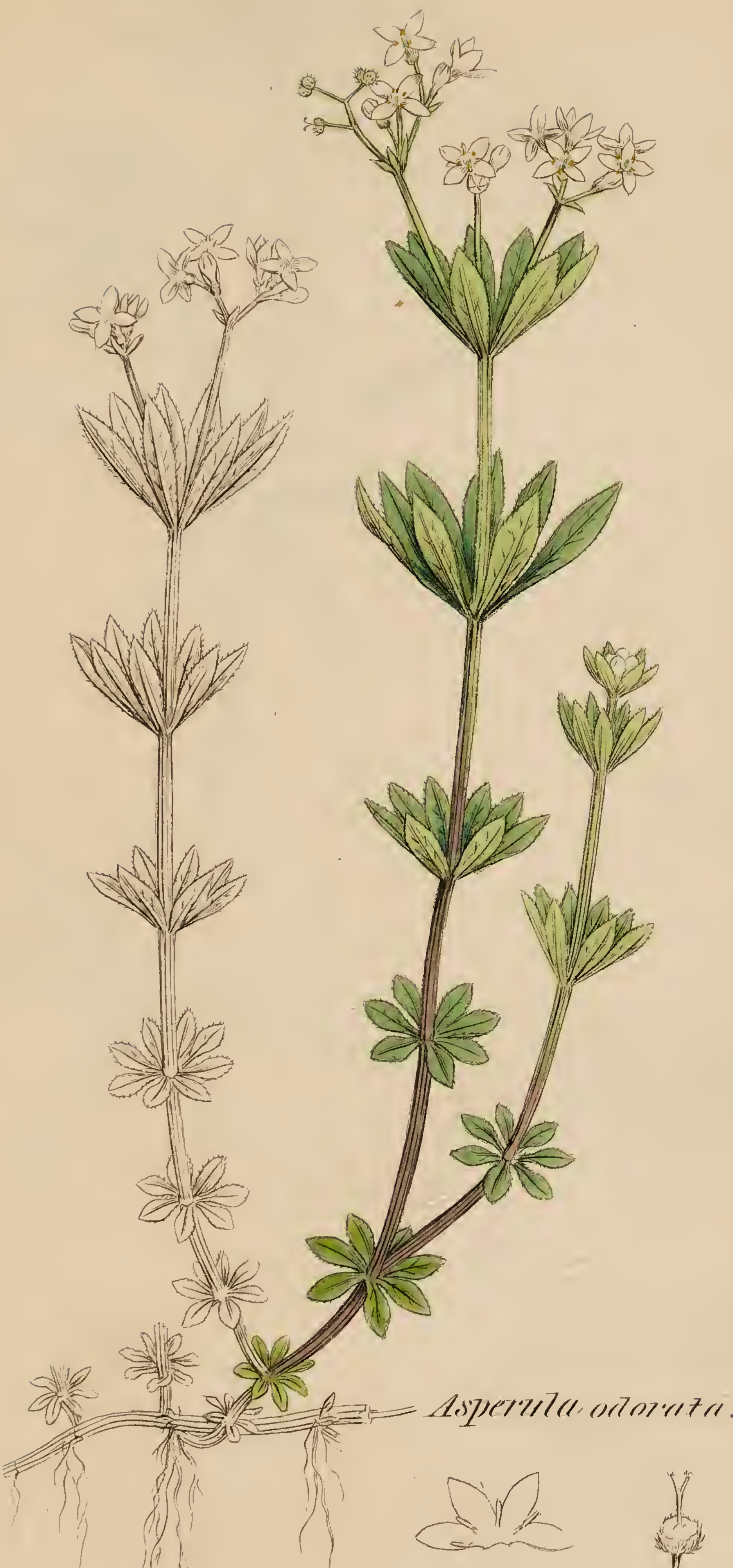

Asperula odorata.

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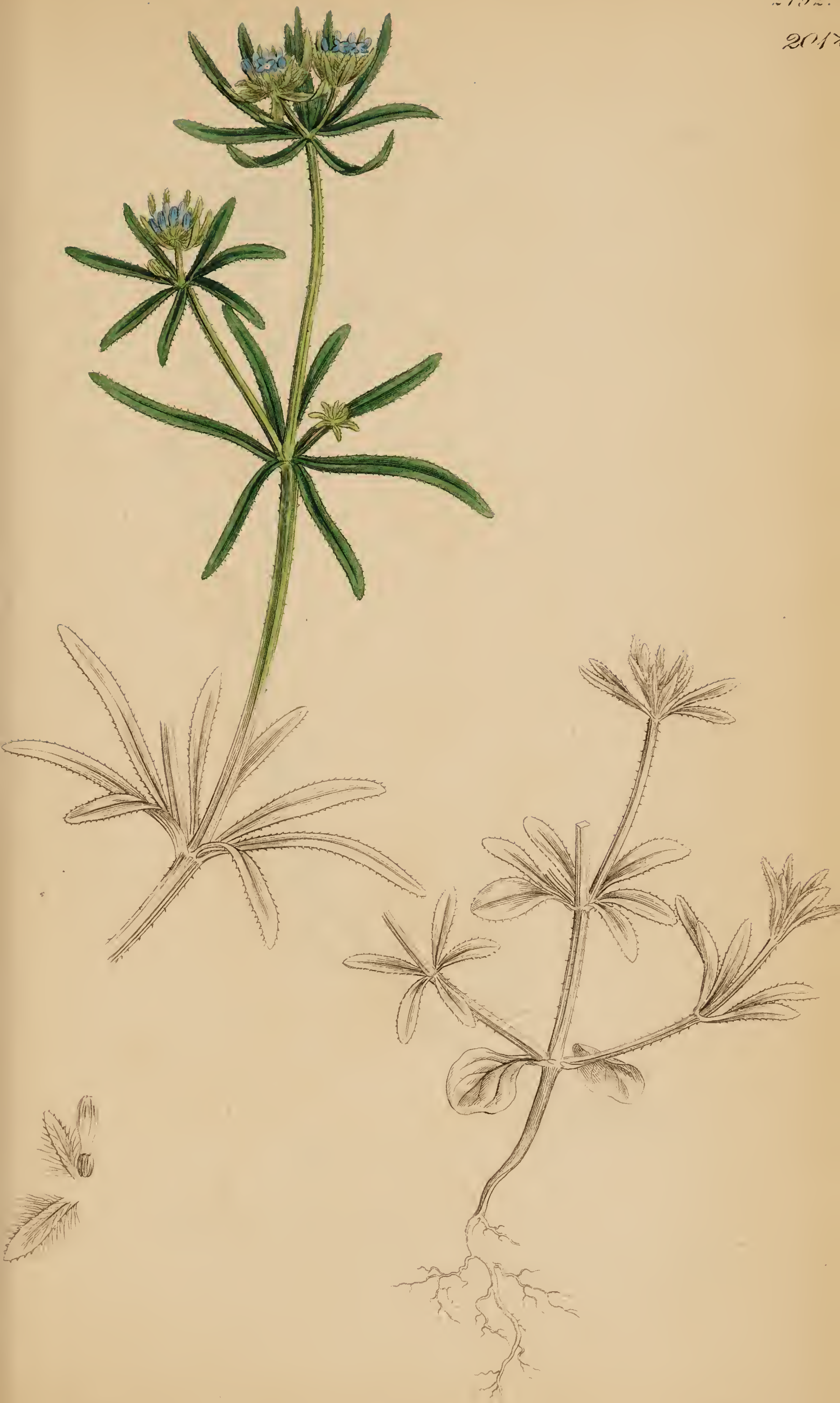
201



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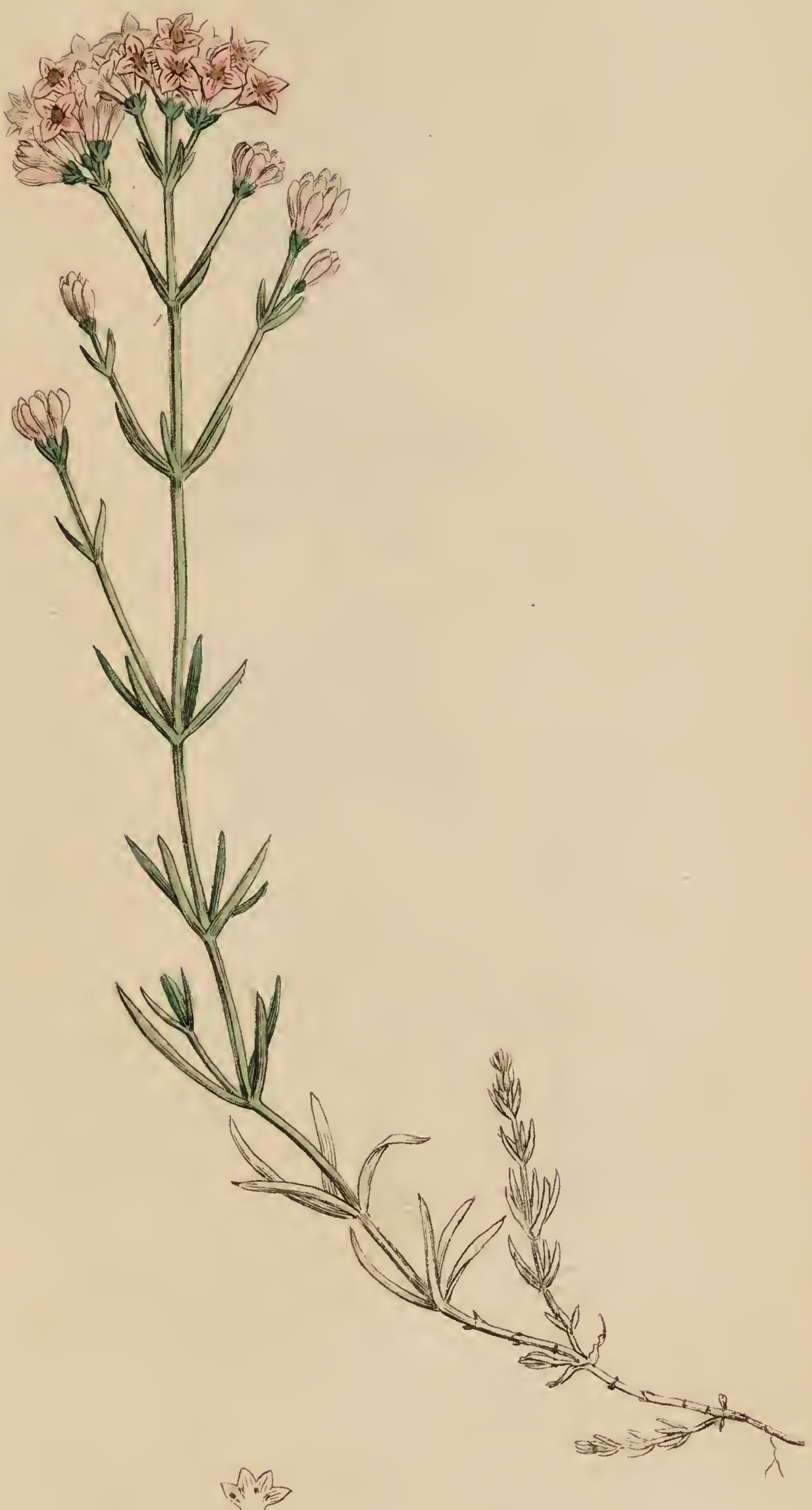
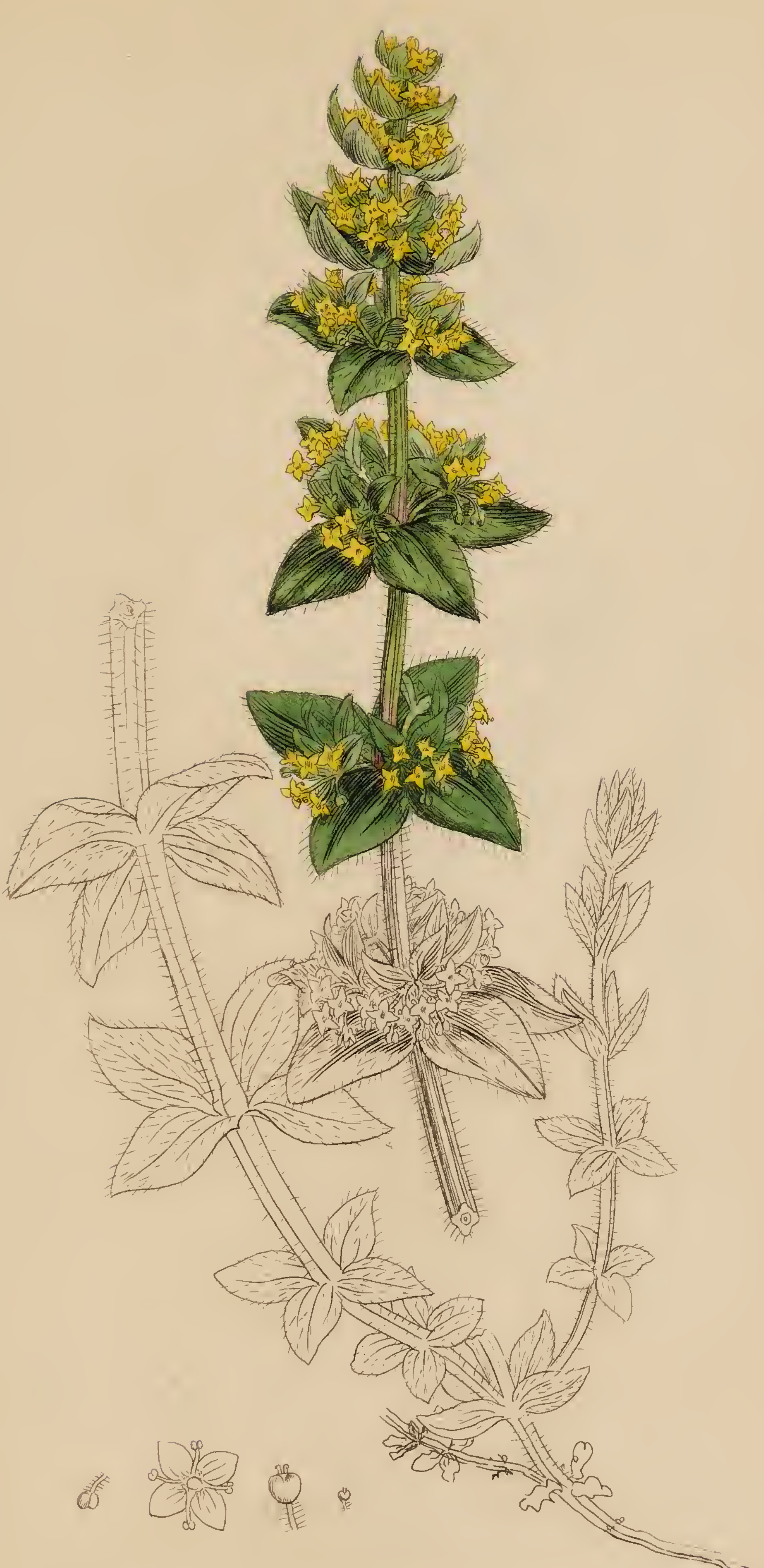


Asperula cynanchica.

J. Sowerby del. Oct. 1. 1791

145.

203.



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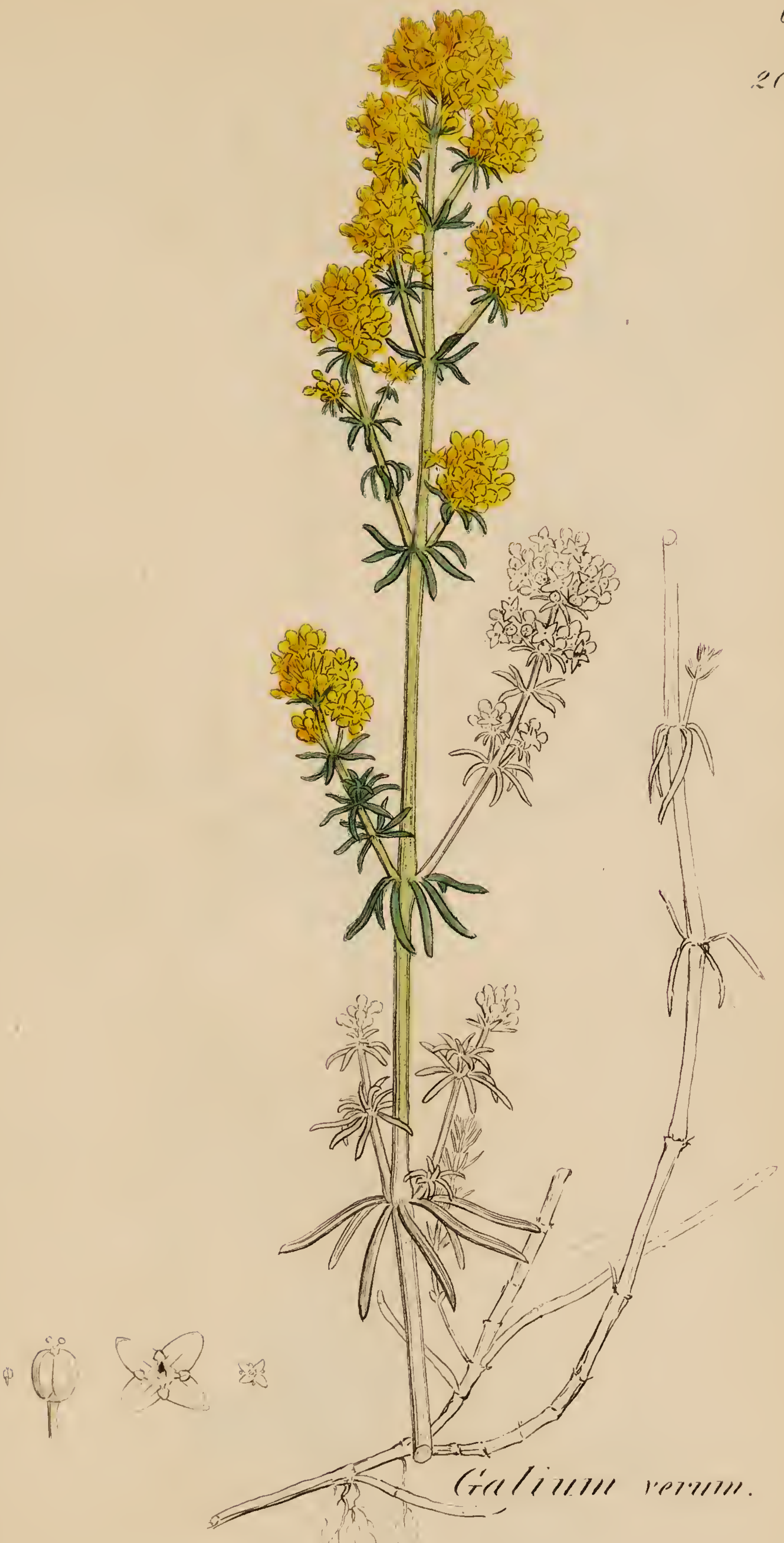
Galium cruciatum.

660.

204.

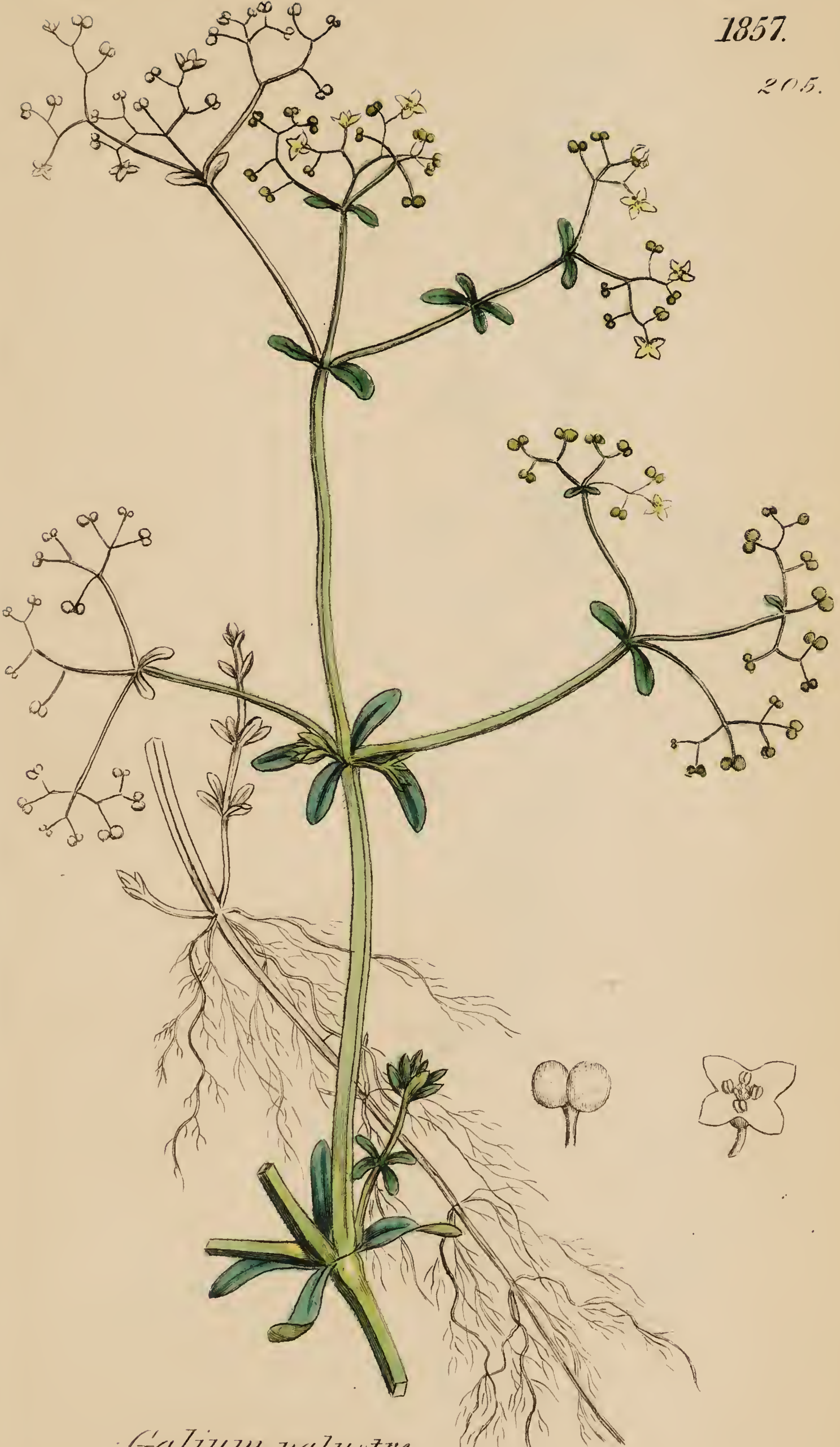


Galium verum.

17 [illegible]

1857.

205.

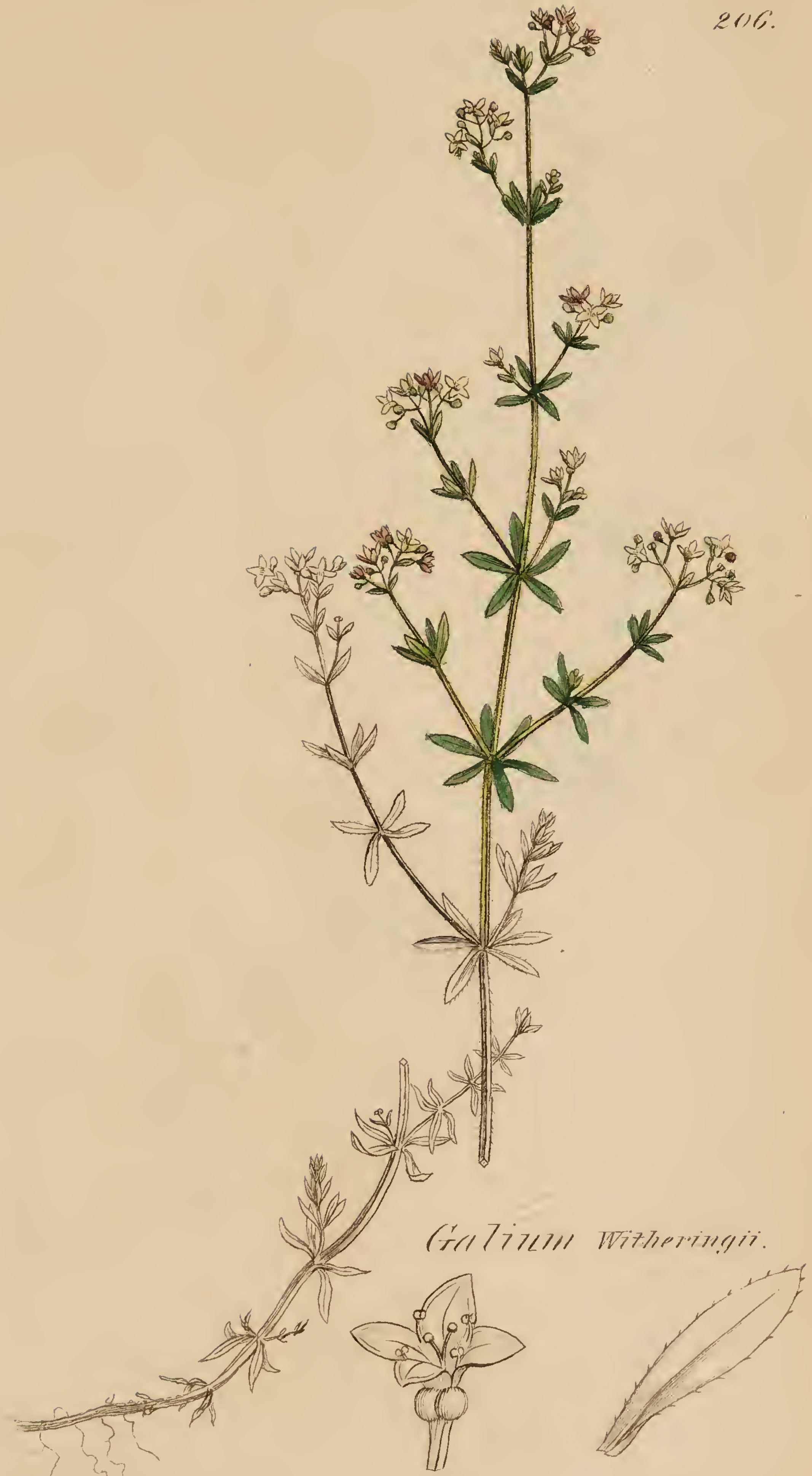


Galium palustre.

Published March 1, 1808, by James Sowerby London.

2206.

206.

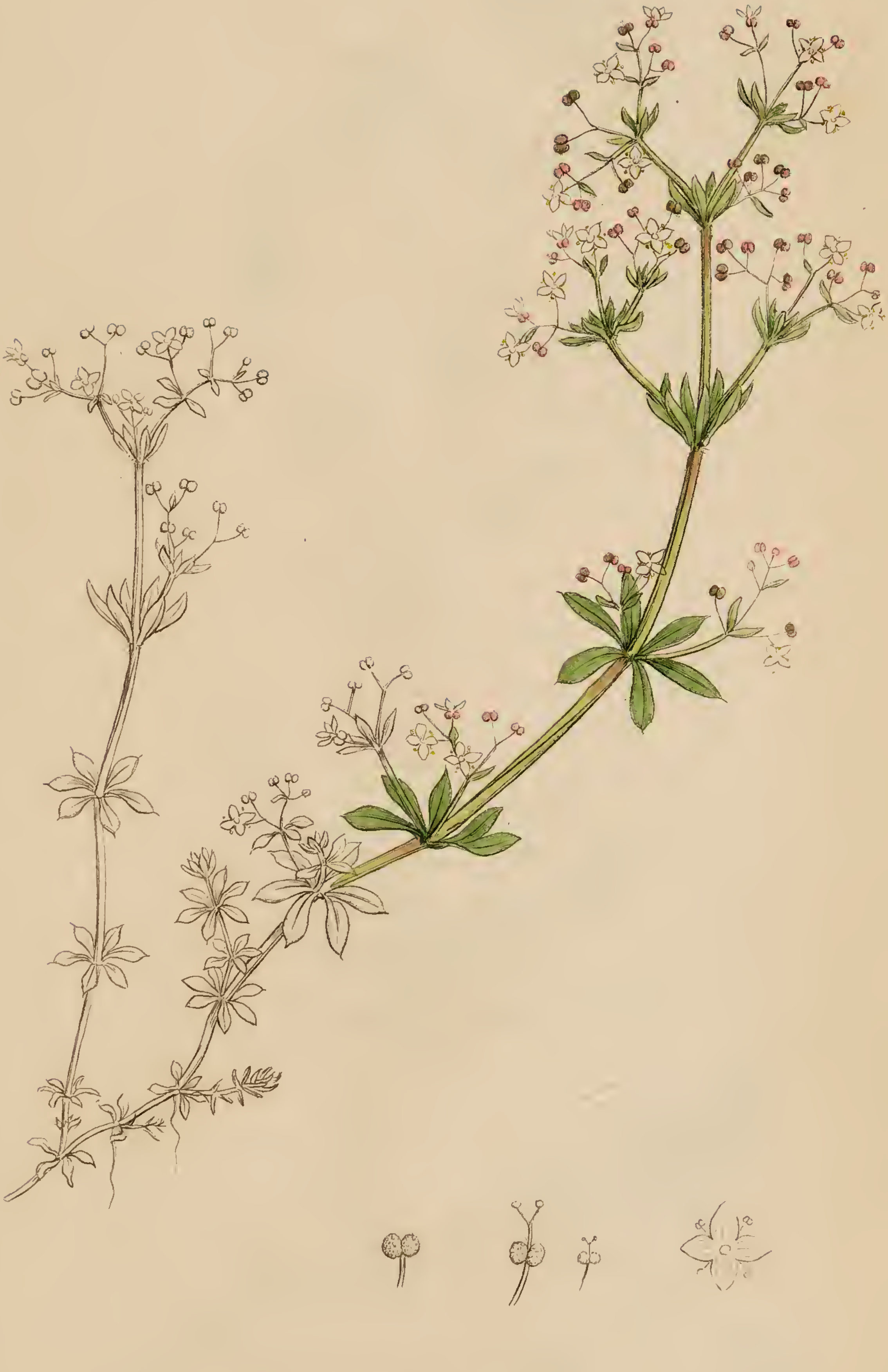


Galium Witheringii.

Published by Js Sowerby, London.

815.

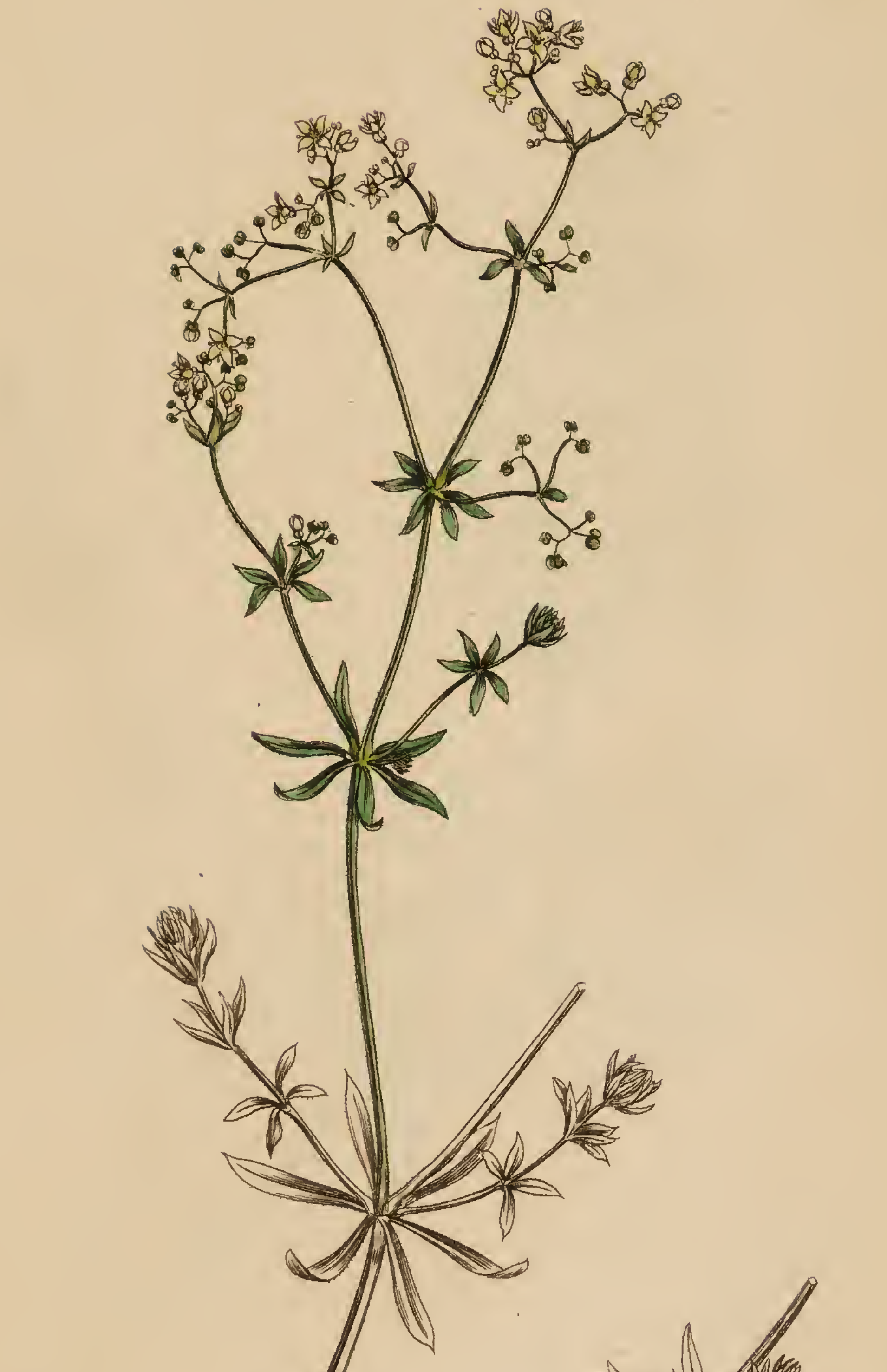
207.



Galium saxatile.

1972

208.

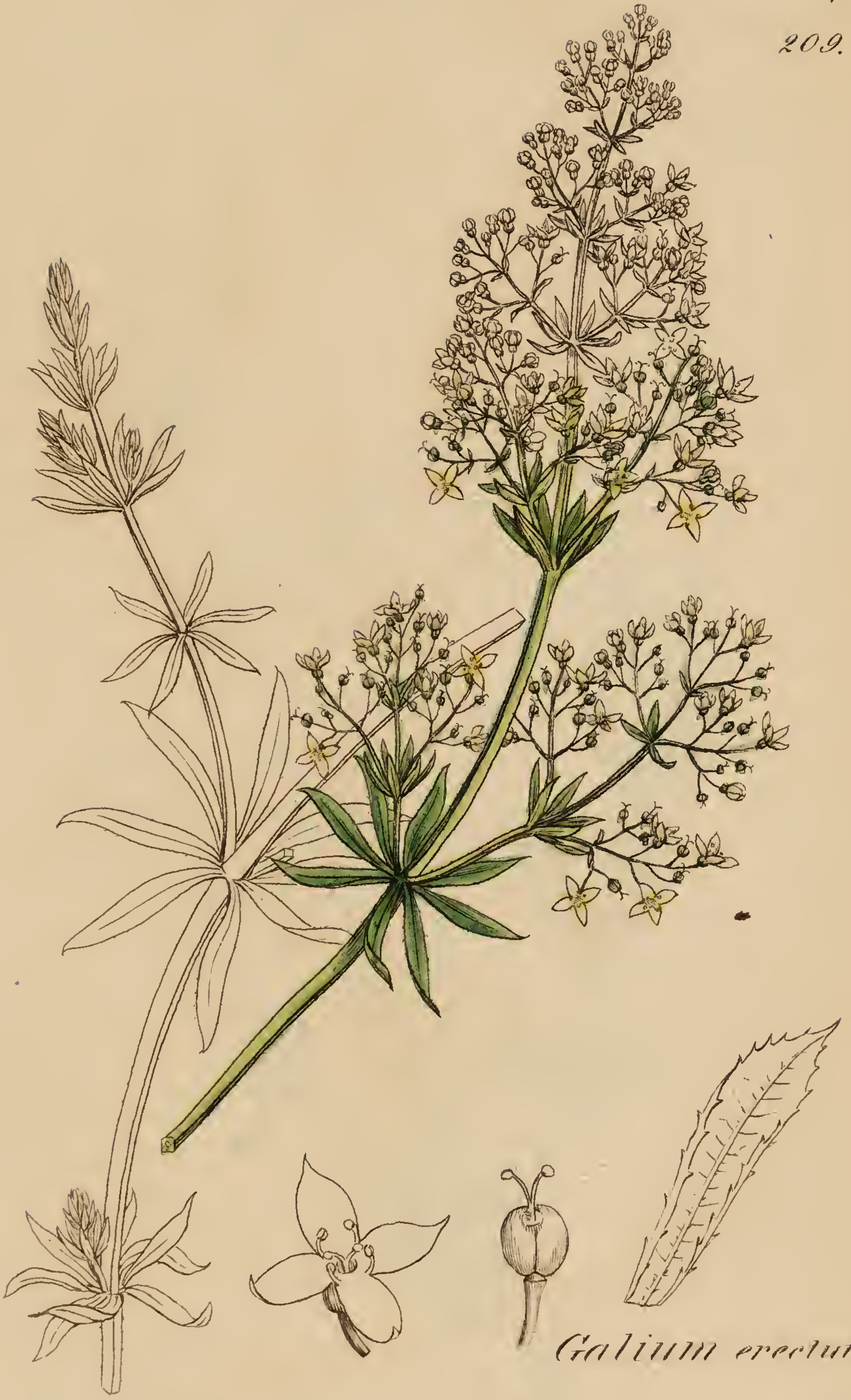


Galium uliginosum.

Jan 1 1809 Publish'd by Jas Sowerby, London

2067.

209.

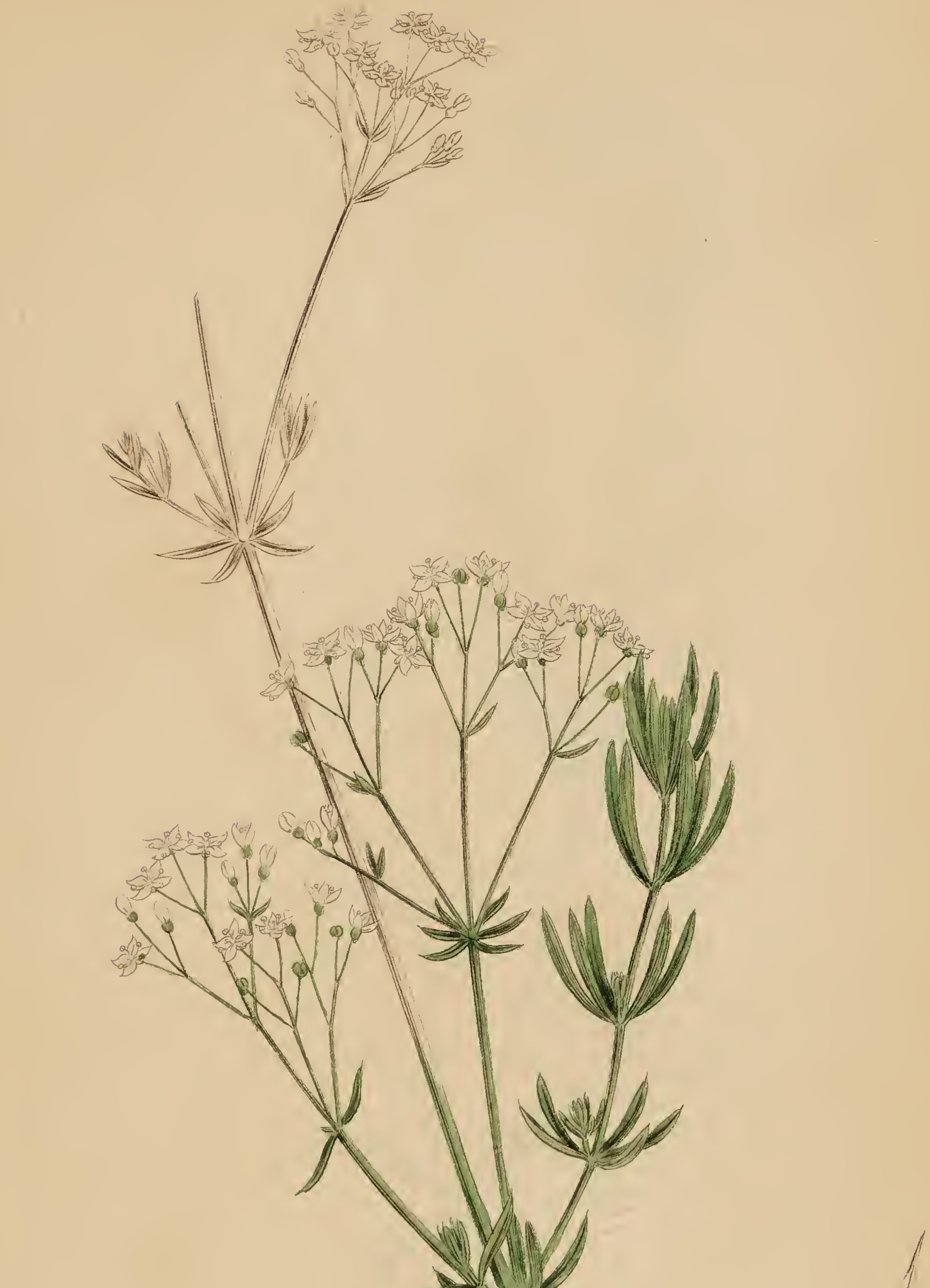


Galium erectum.

Oct 1 1809 publiſhed by Js Sowerby London

2783

209 *



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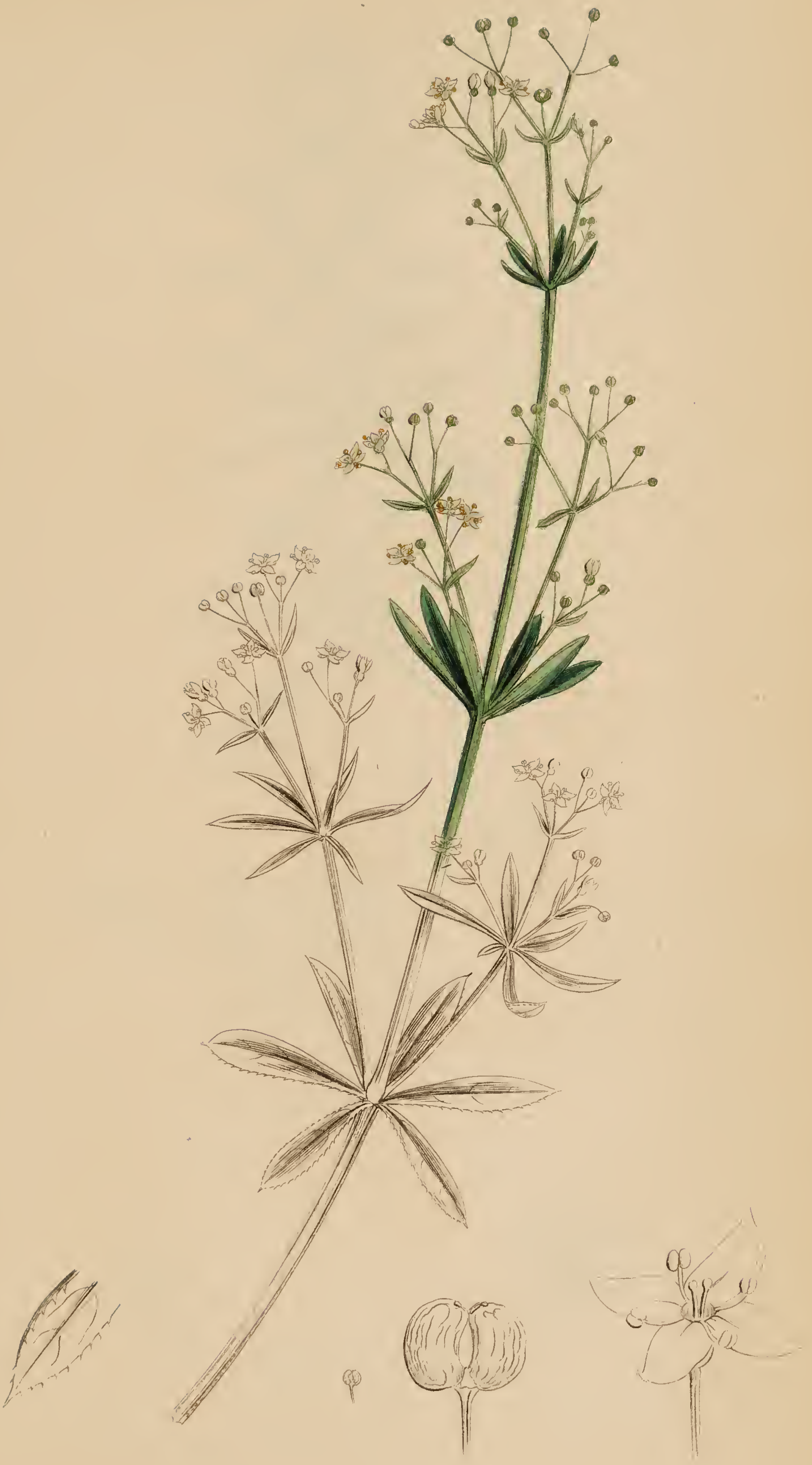
2784.

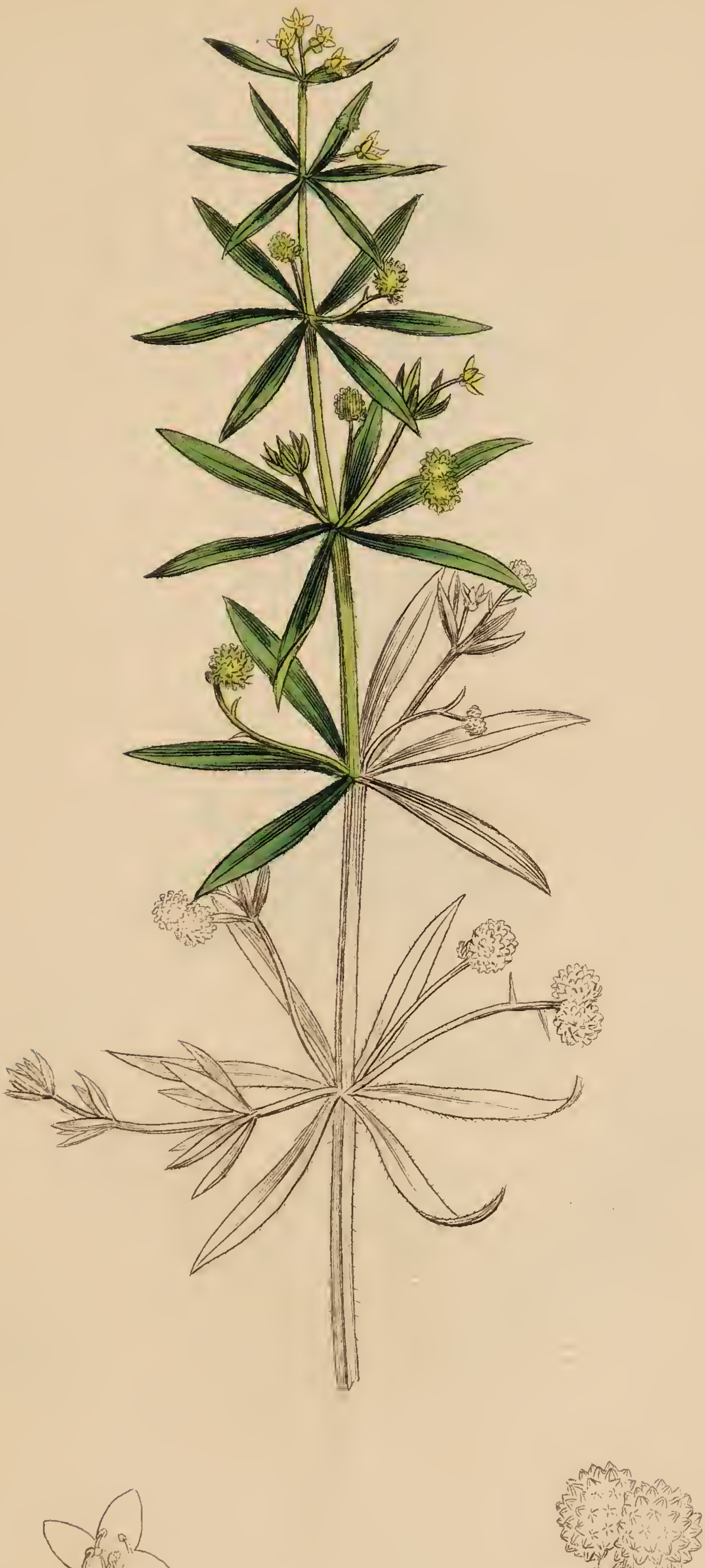
209**



May 1st 1834.

2173

210.

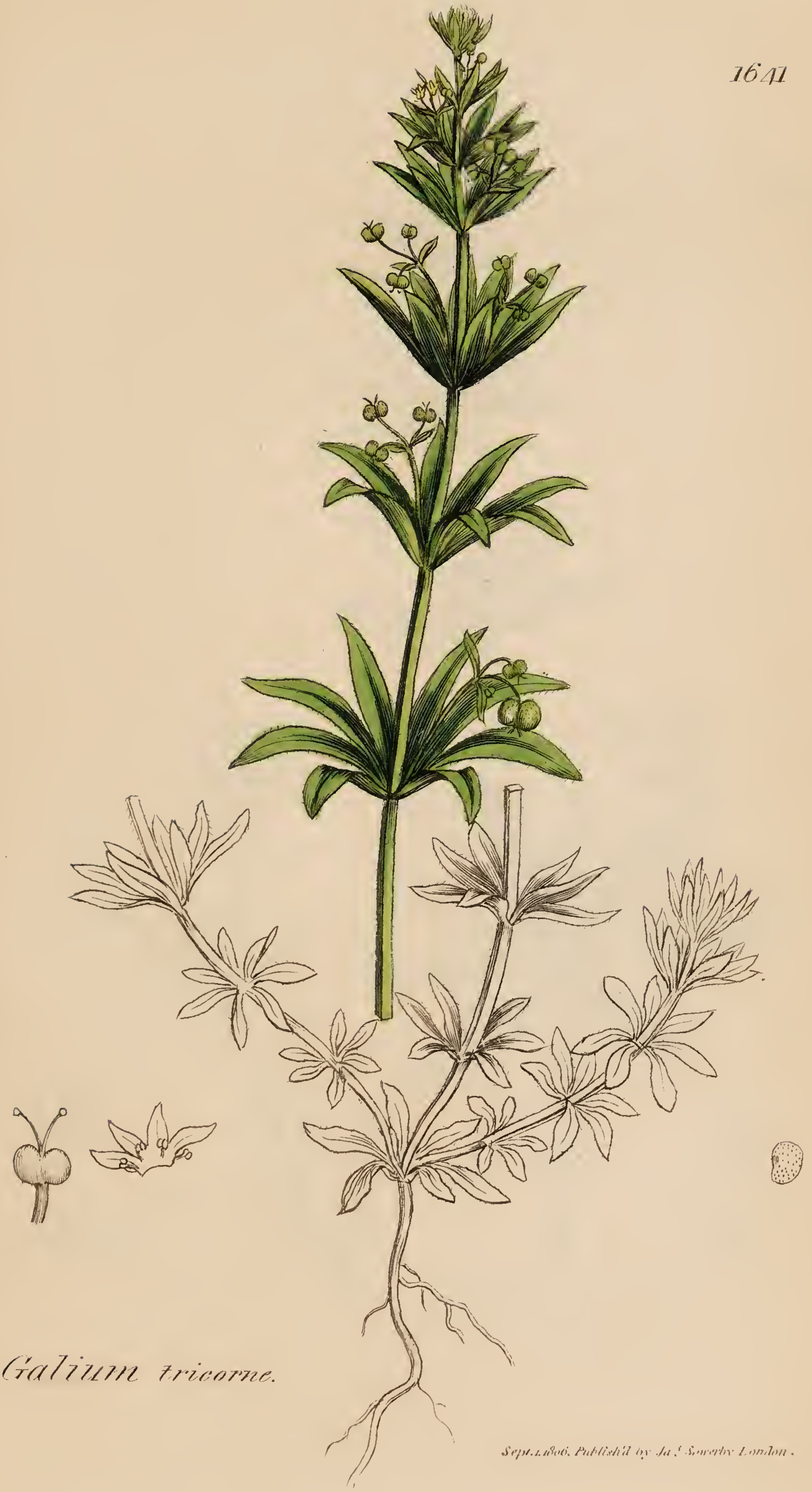


Galium saccharatum.

[illegible] by J.E. [illegible] London

1641

211.

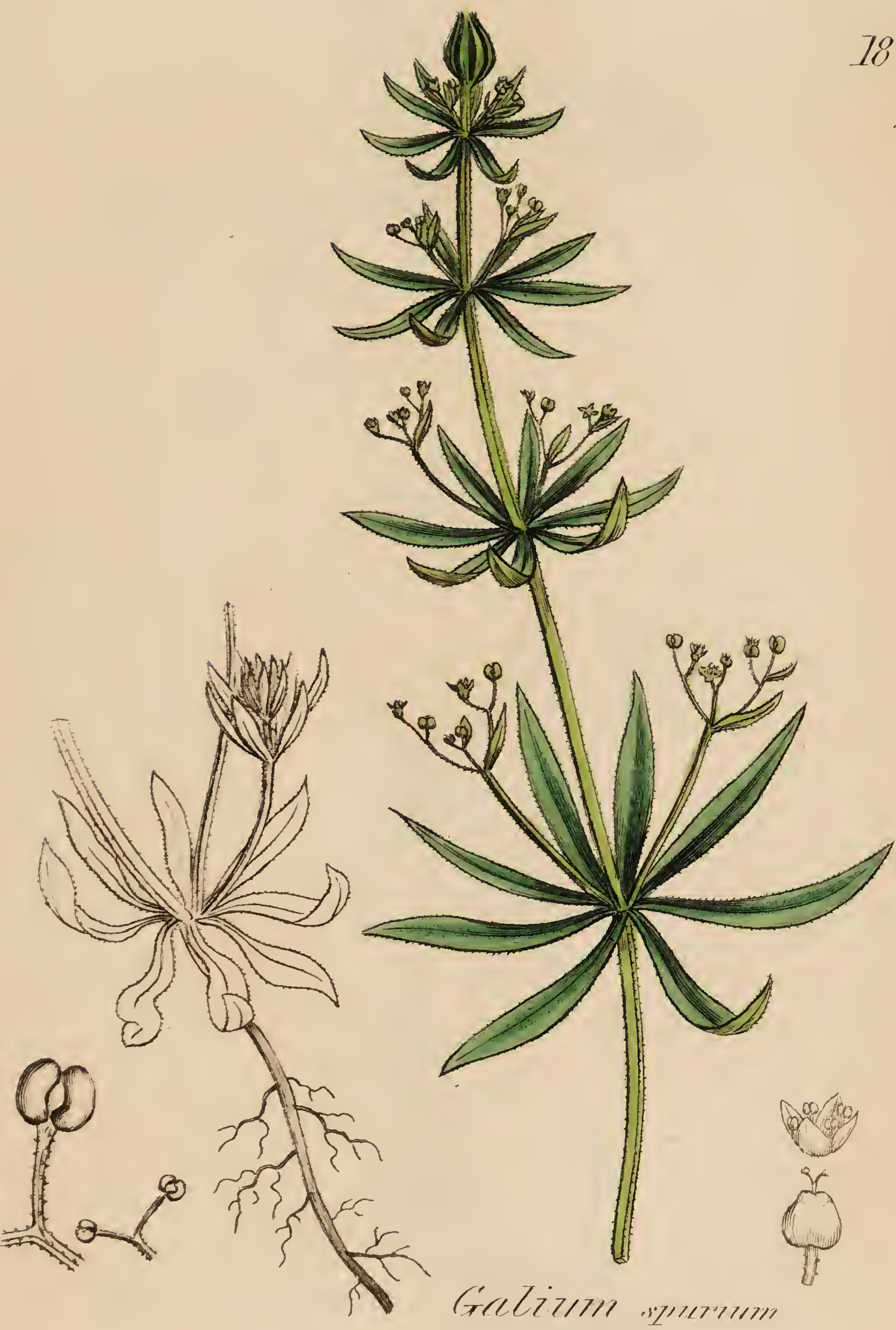


Galium tricorne.

Sept.1.1806. Publish'd by Ja.^{s} Sowerby London.

1871

212.

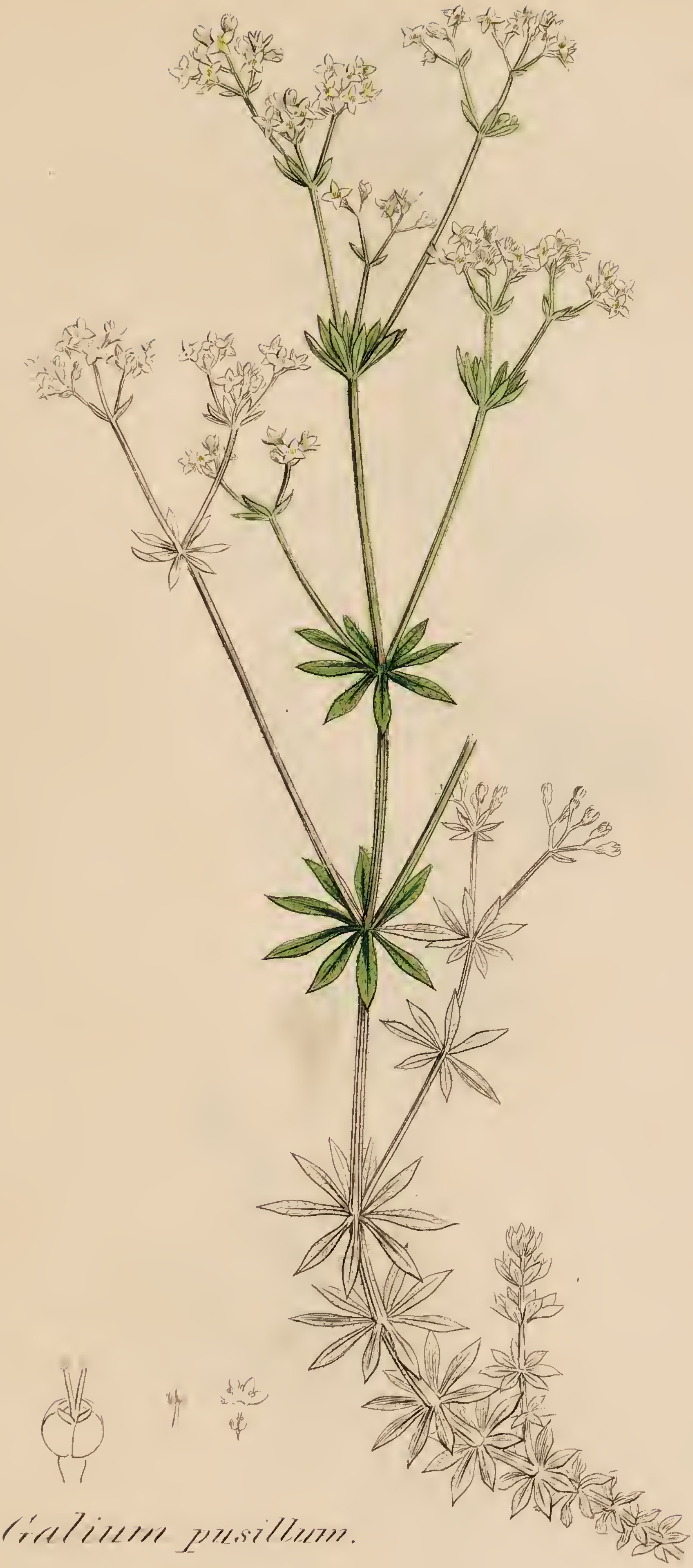


Galium spurium

Apr. 1. 1808. Publish'd by Jas. Sowerby London.

74.

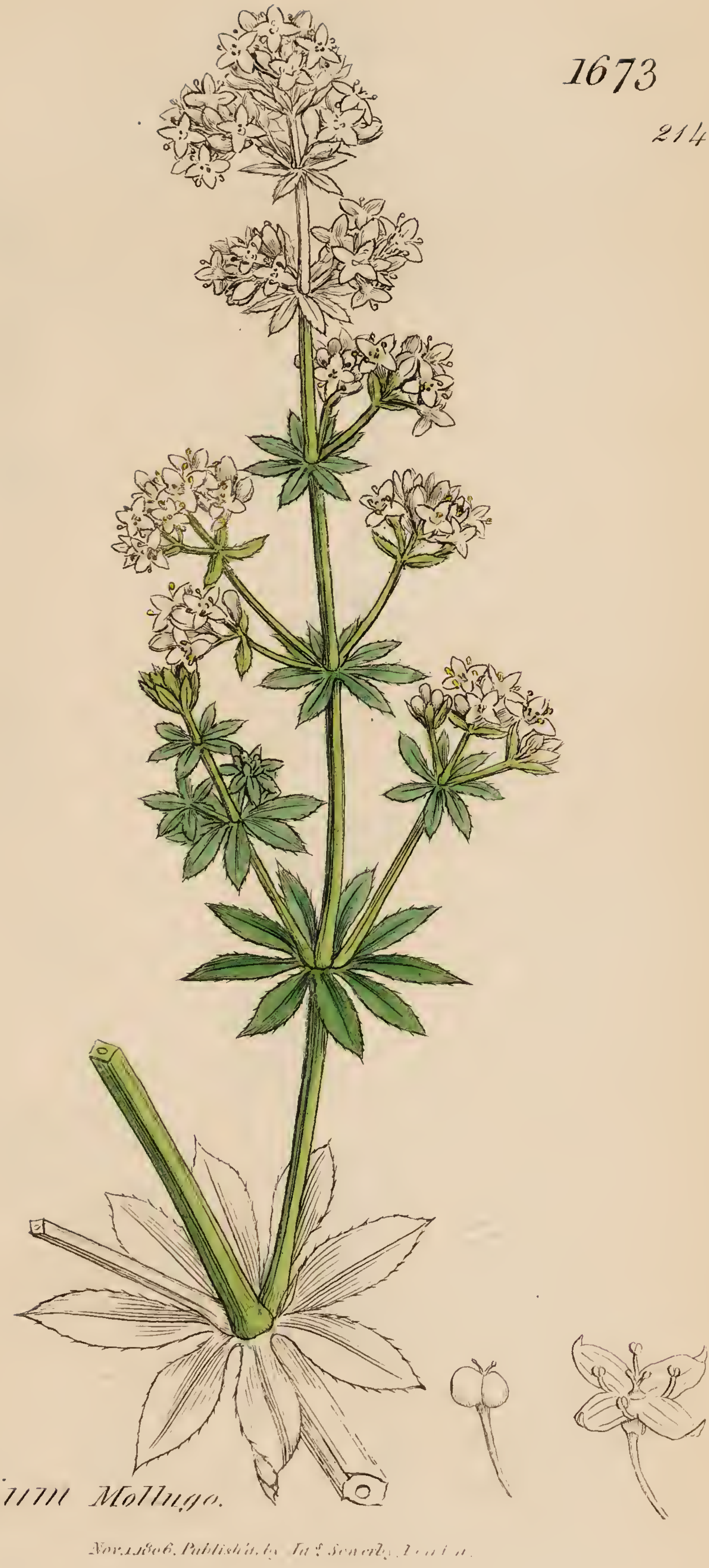
213.



Galium pusillum.

1673

214.

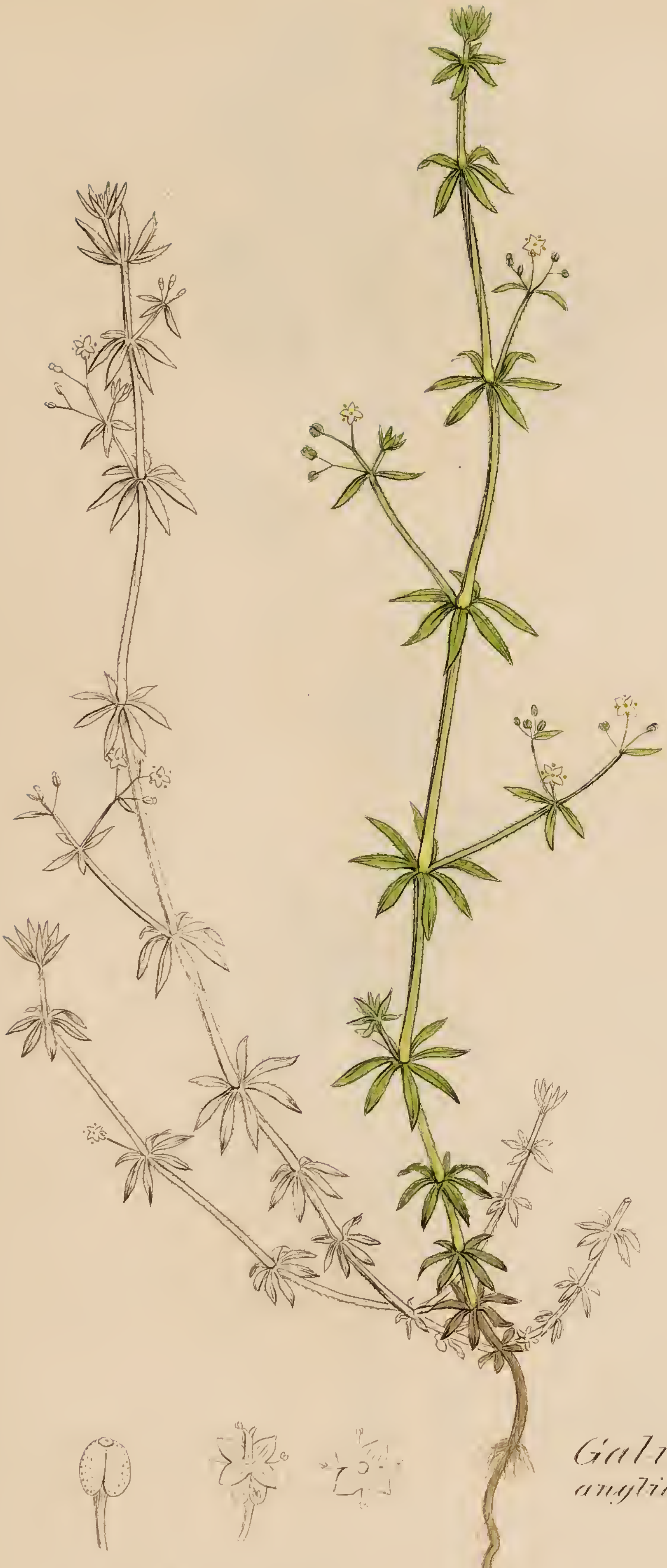


Galium Mollugo.

Nov.1.1806. Publish'd by Ja.s Sowerby, London.

384

215.

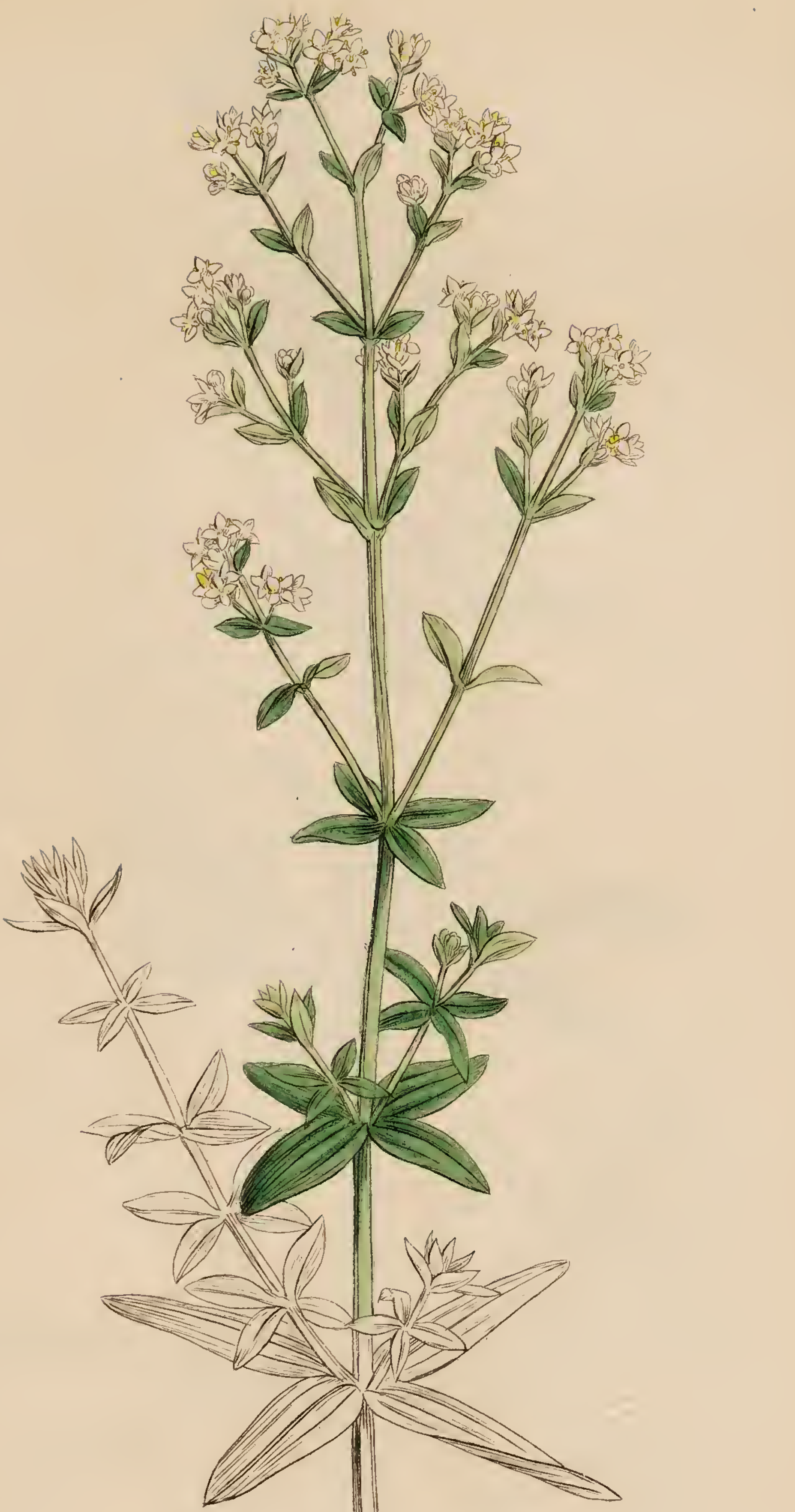


Galium anglicum.

March 1 1797 Publish'd by J. Sowerby [illegible]

115

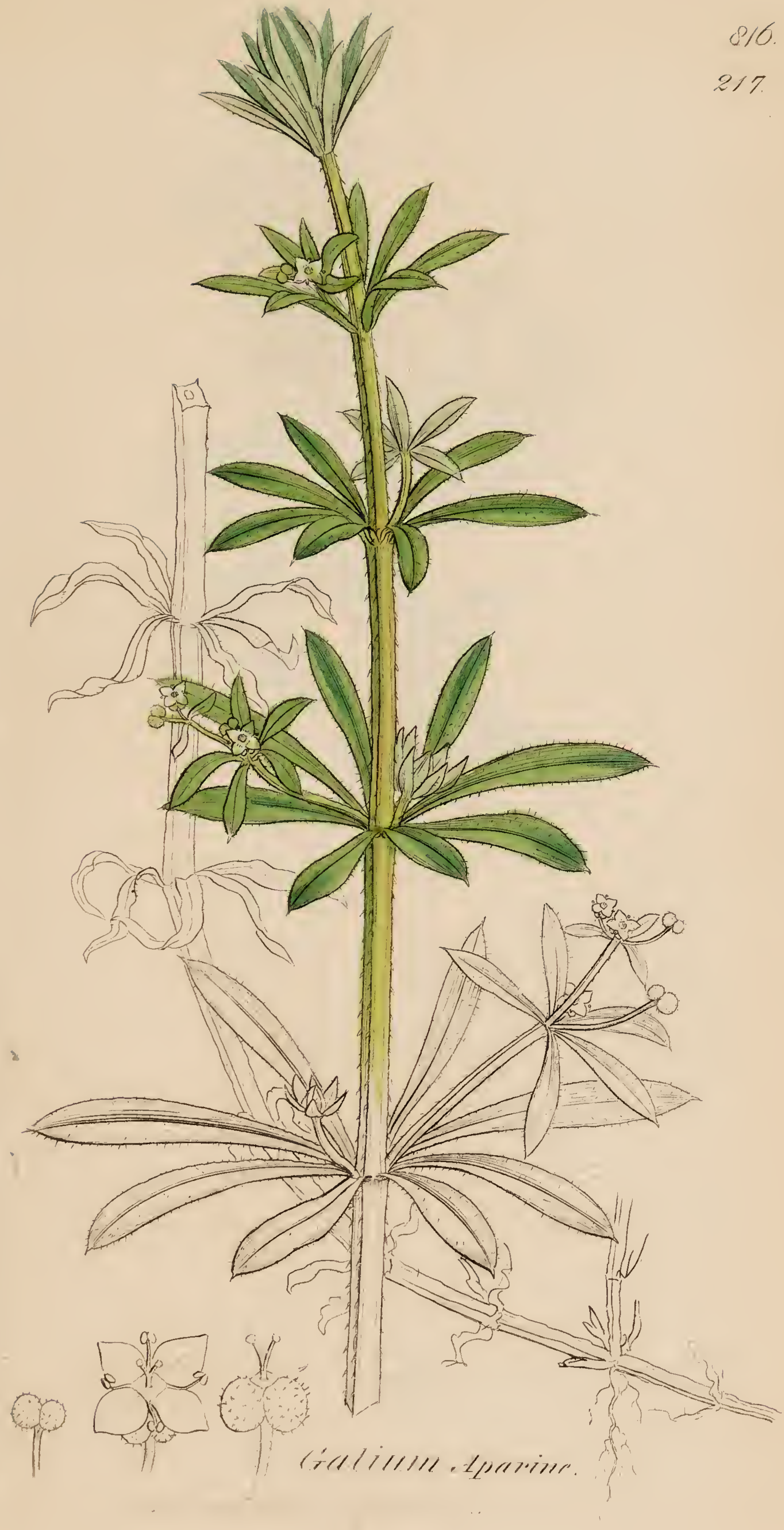
216.



Galium boreale.

816.

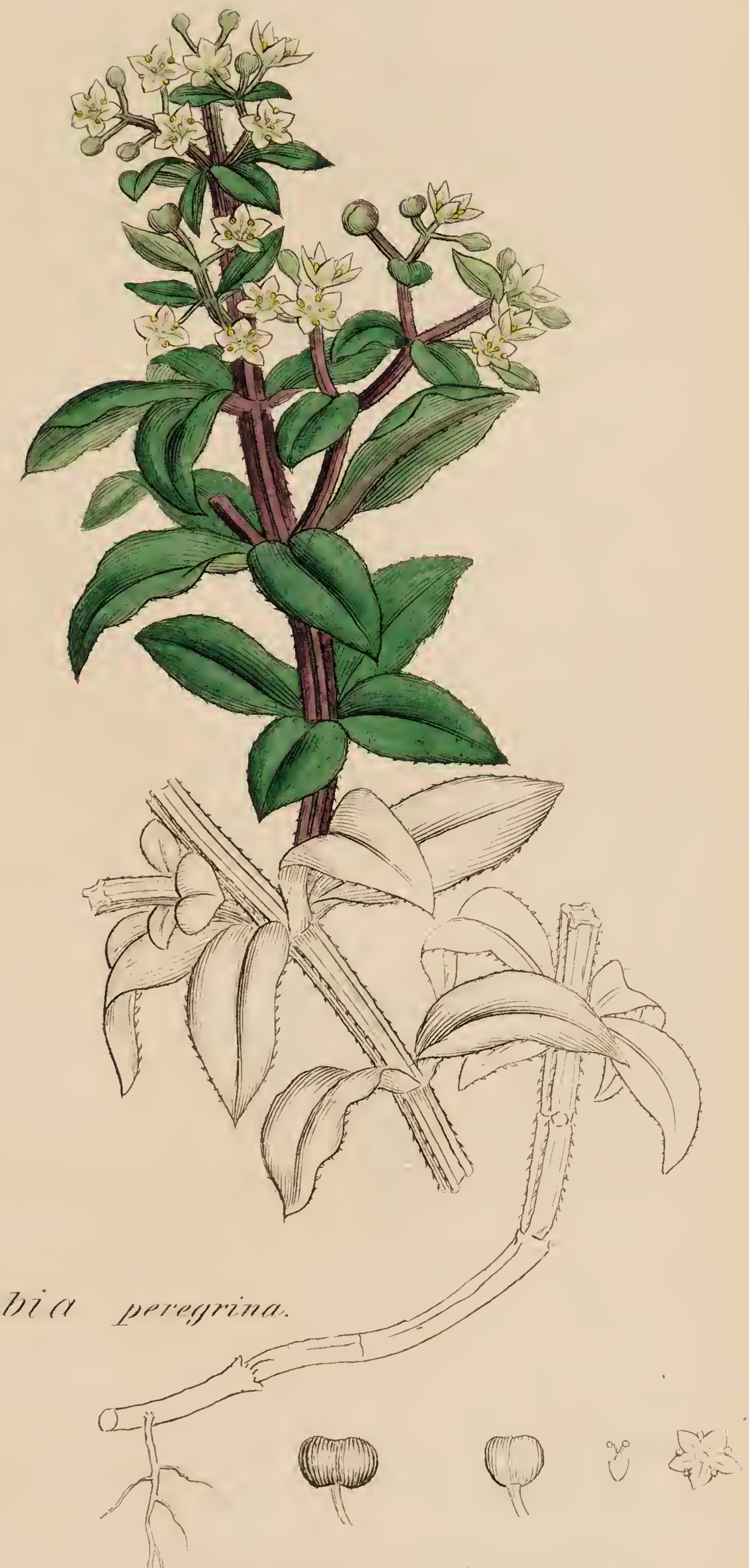
217.



Galium Aparine.

851.

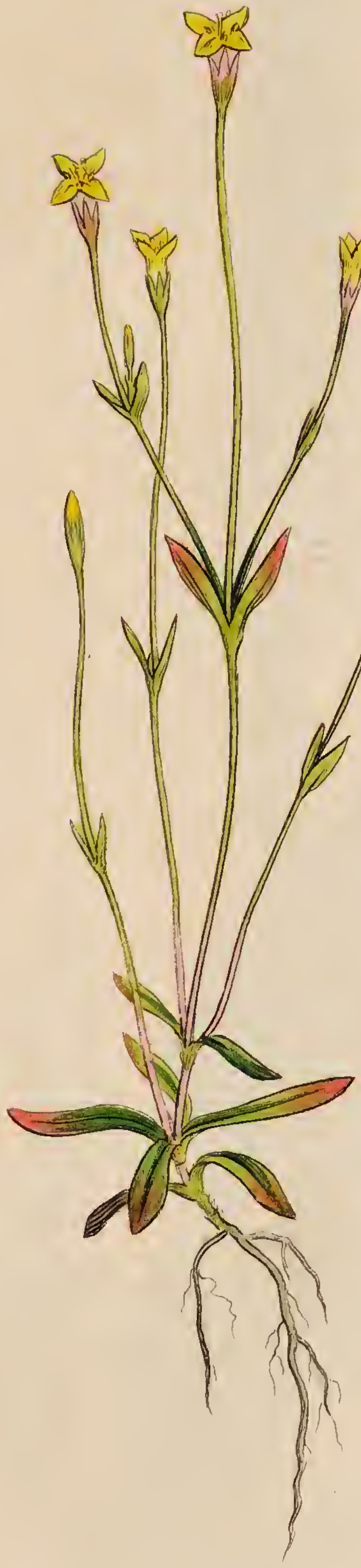
218.



Rubia peregrina.

23̃5.

219.

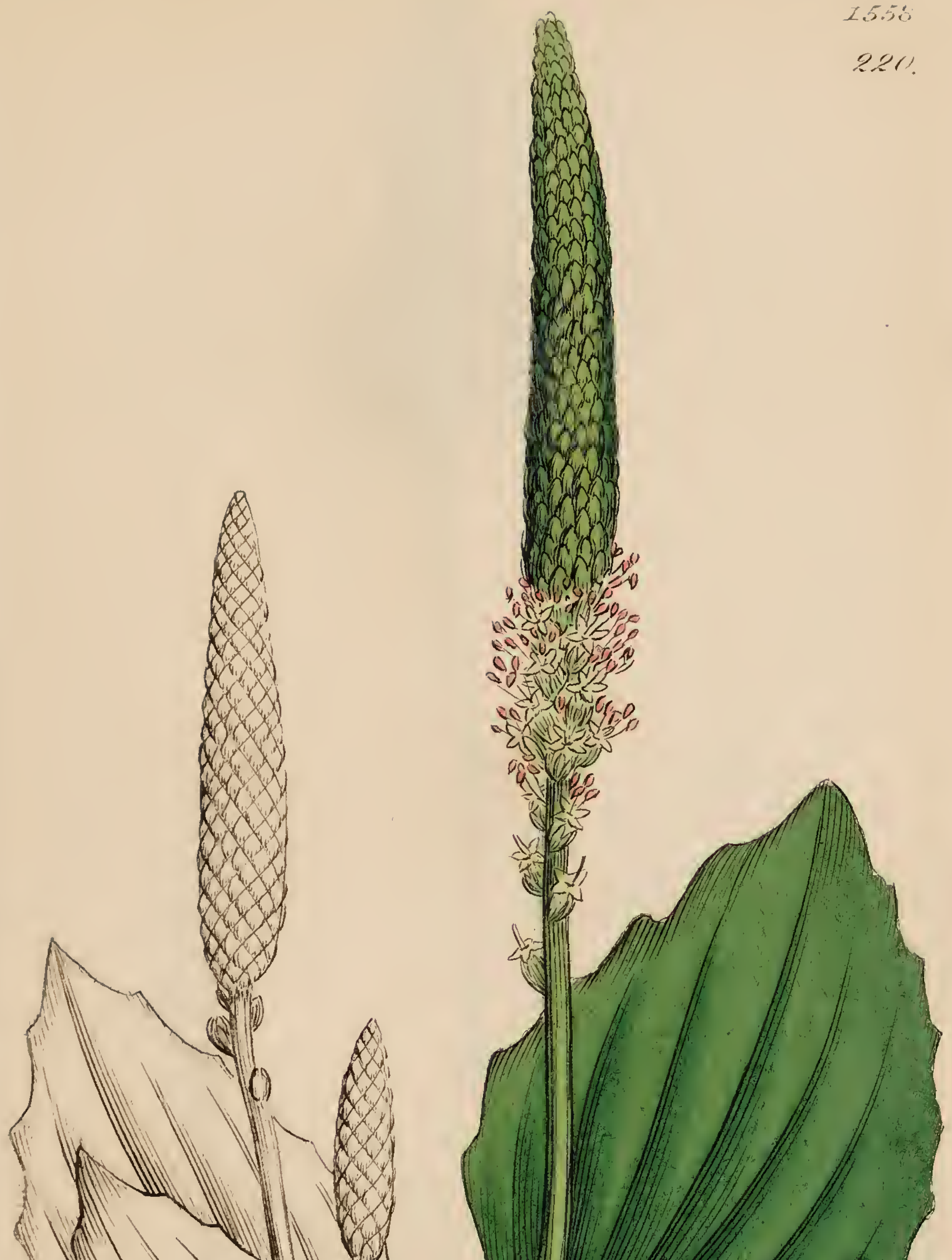


Exacum filiforme.

[illegible] 179 [illegible]

1558

220.

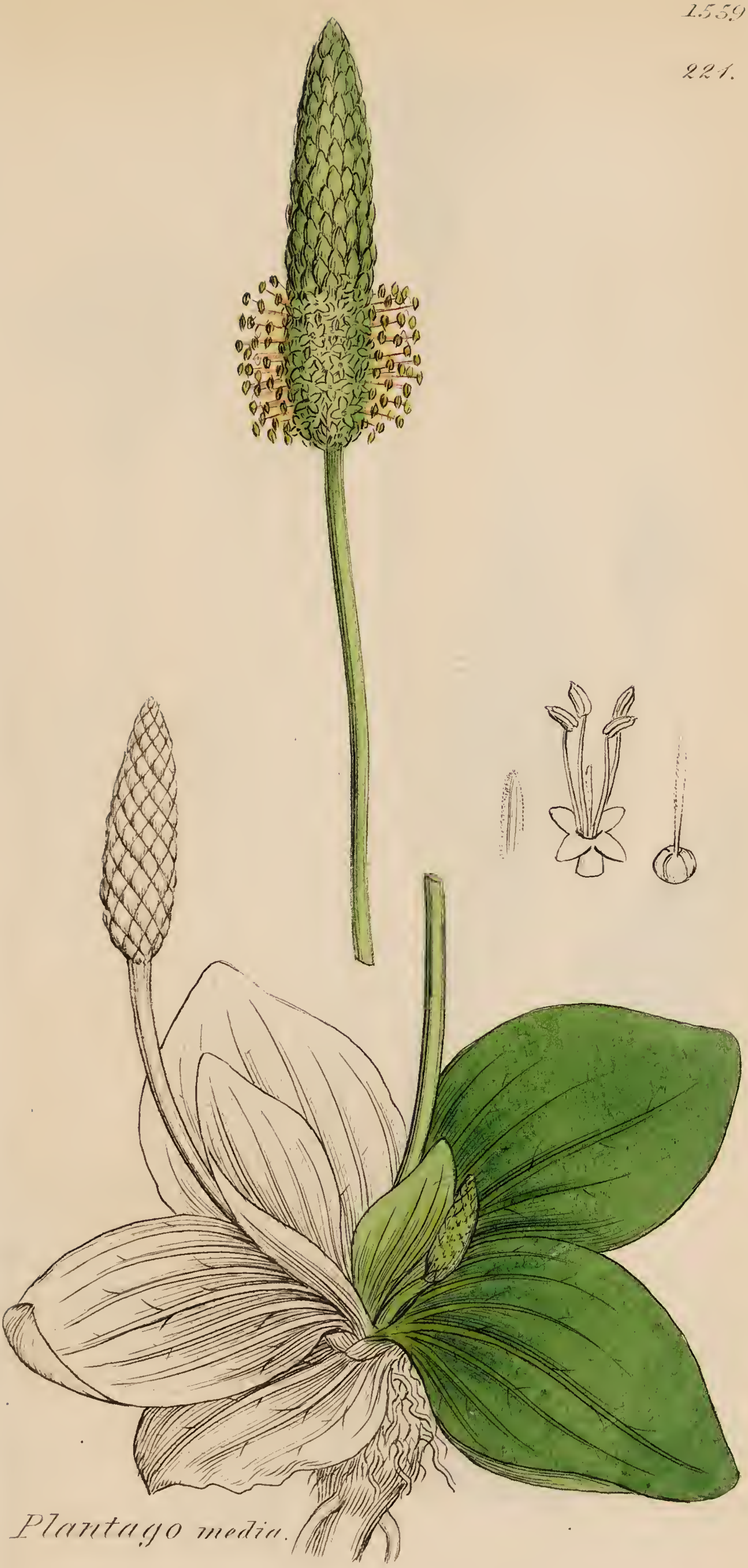


Plantago
major.

Pub.d 1 Jan.y Published by Jas Sowerby London

1559

221.

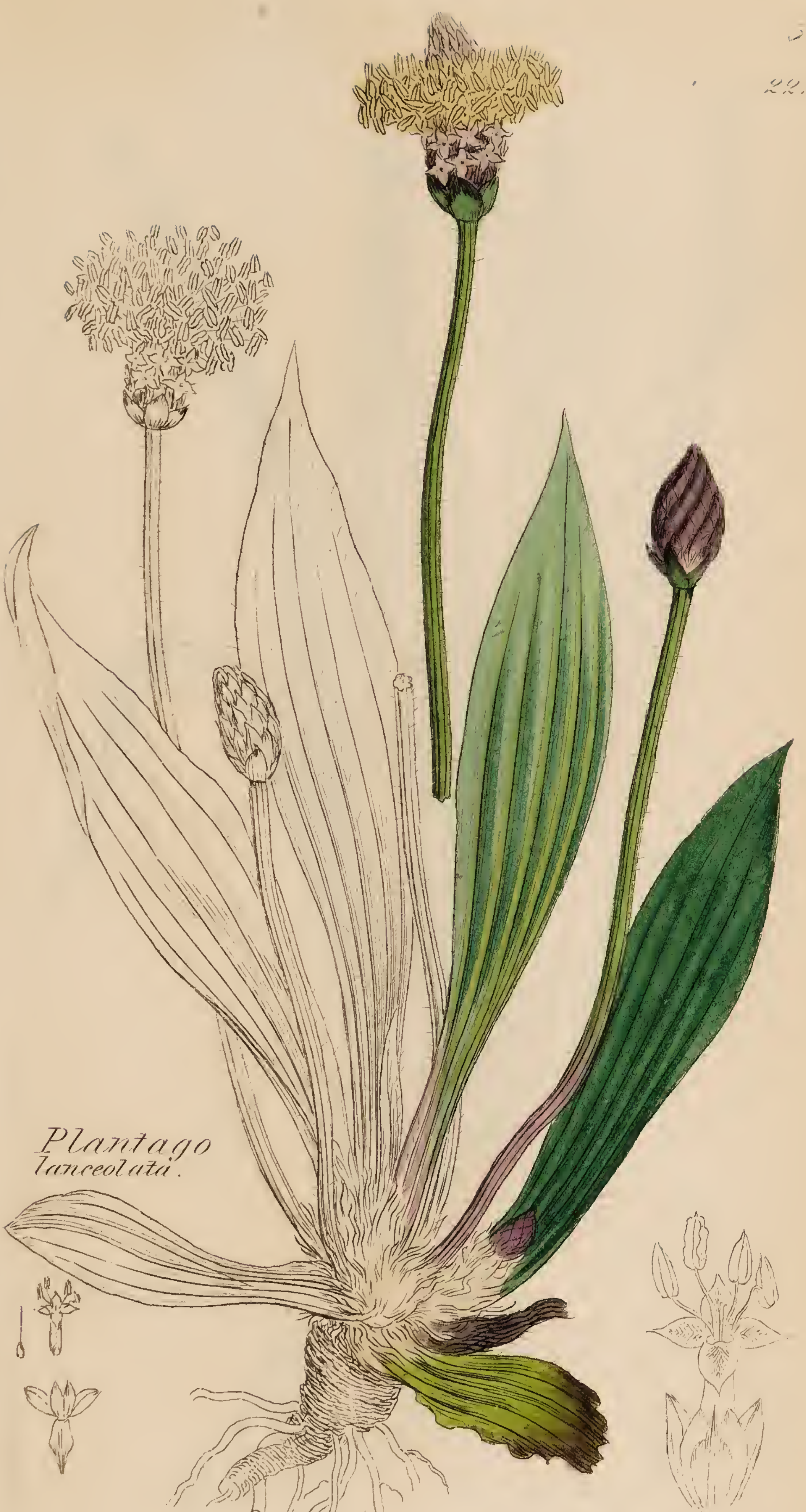


Plantago media.

Feb 1 1806. Publiſhed by J. Sowerby Londn

307

222.



Plantago
lanceolata.

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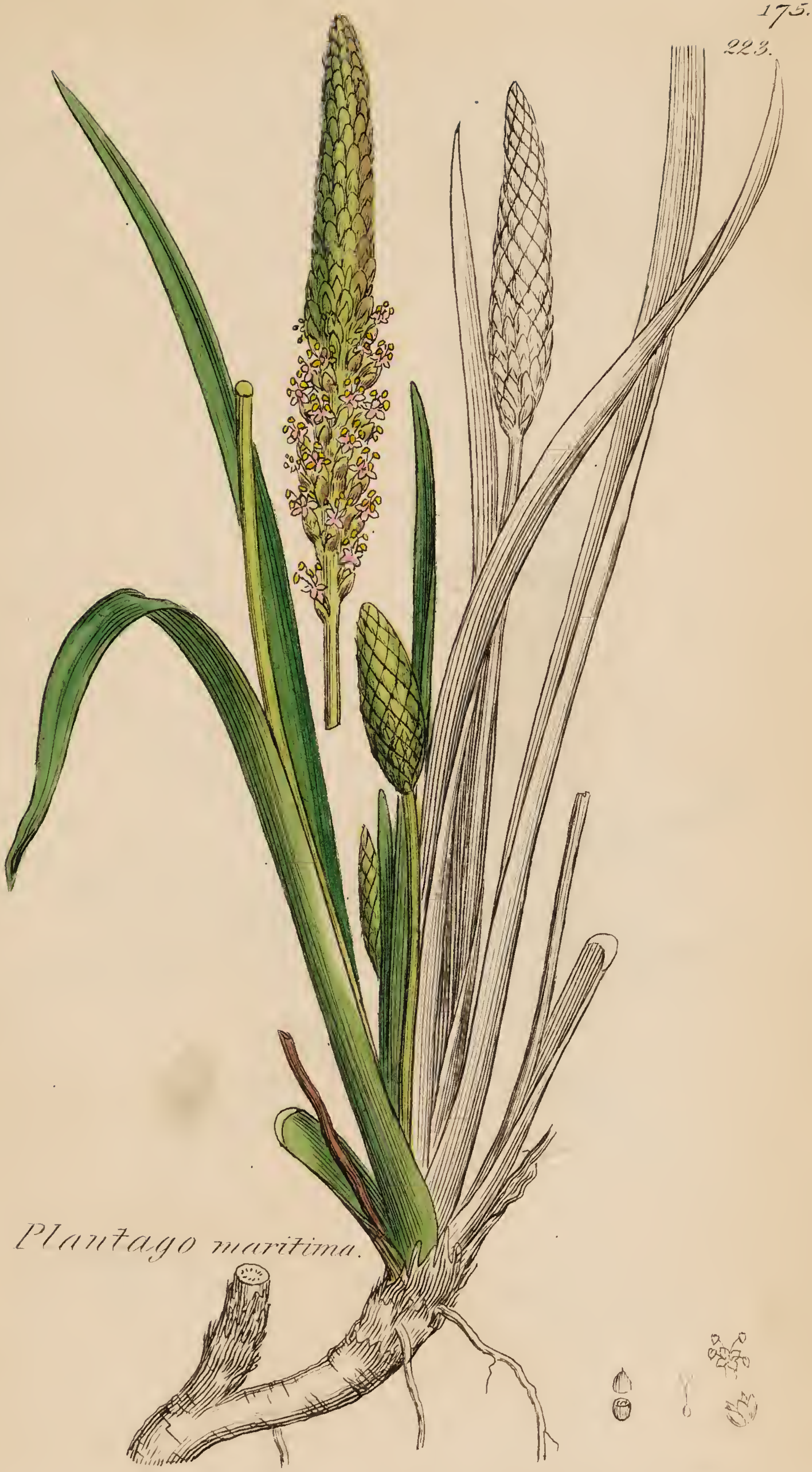
175.

223.



Plantago maritima.

J. Sowerby del.

892.

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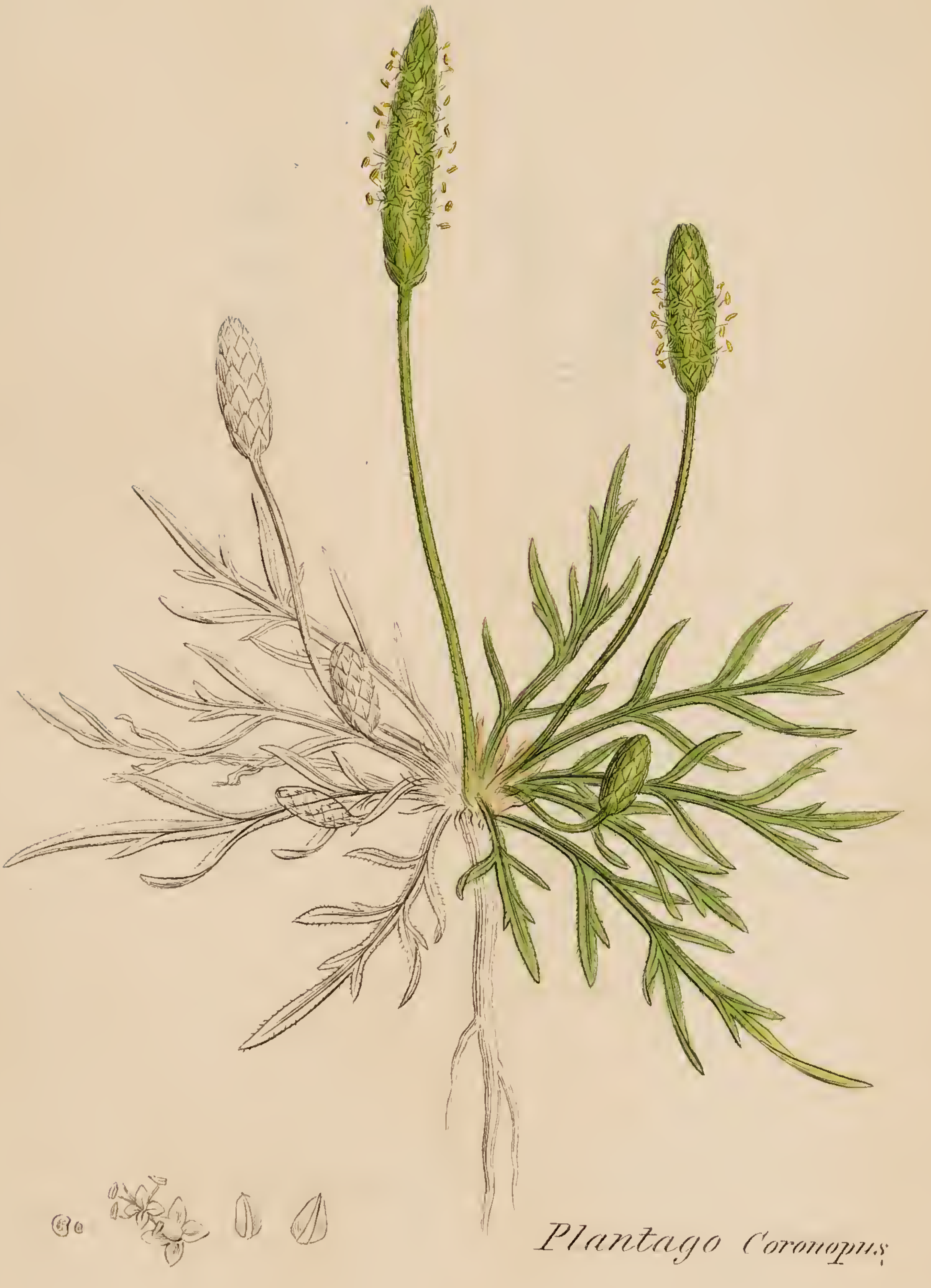
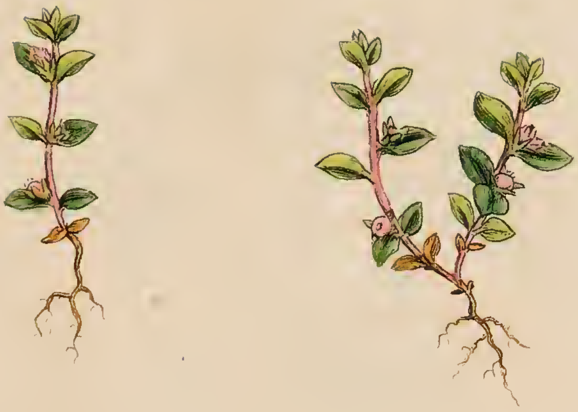
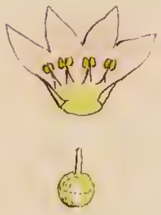


Plantago Coronopus.

531

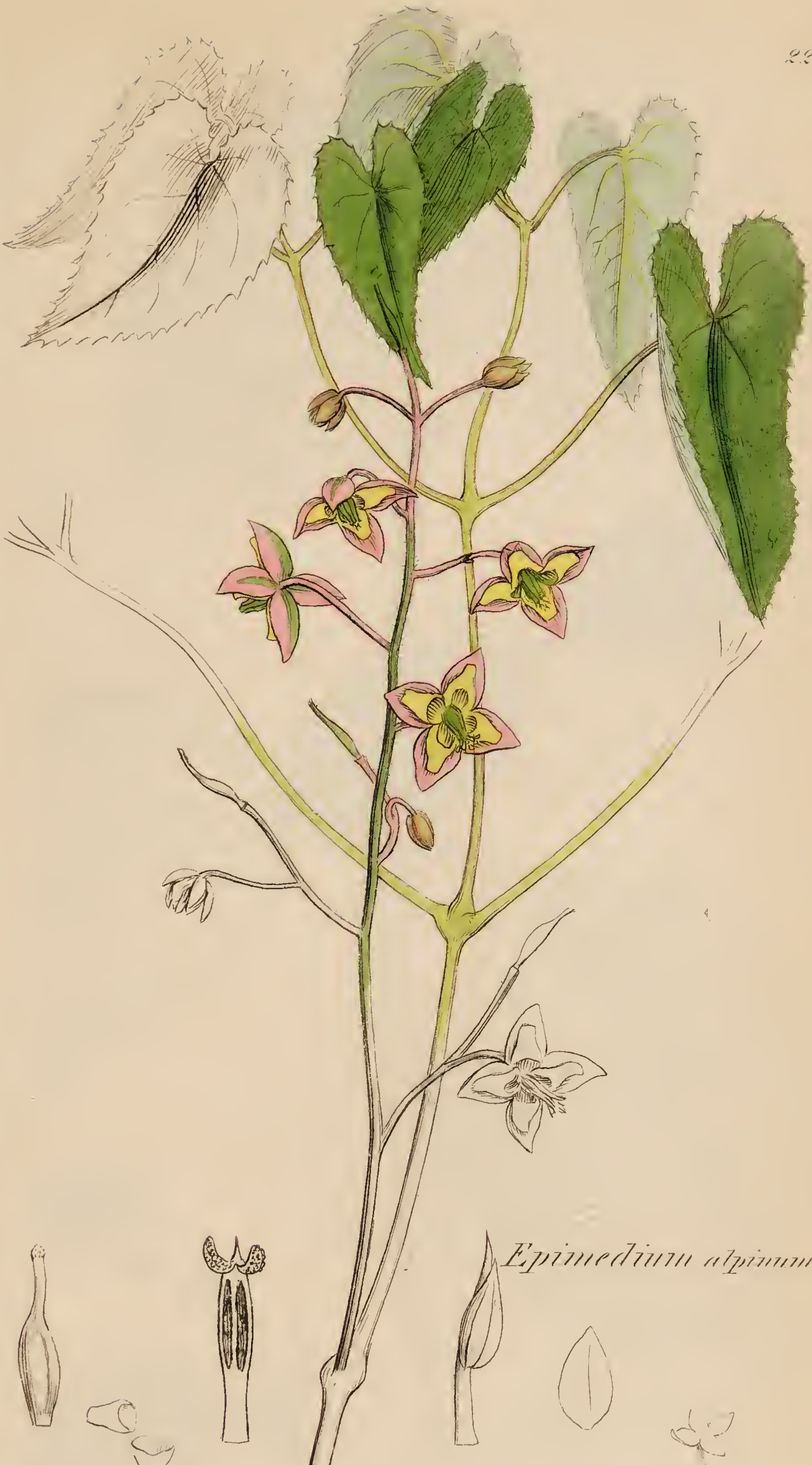
225.





Centunculus minimus.

[illegible] 798. [illegible] by [illegible]

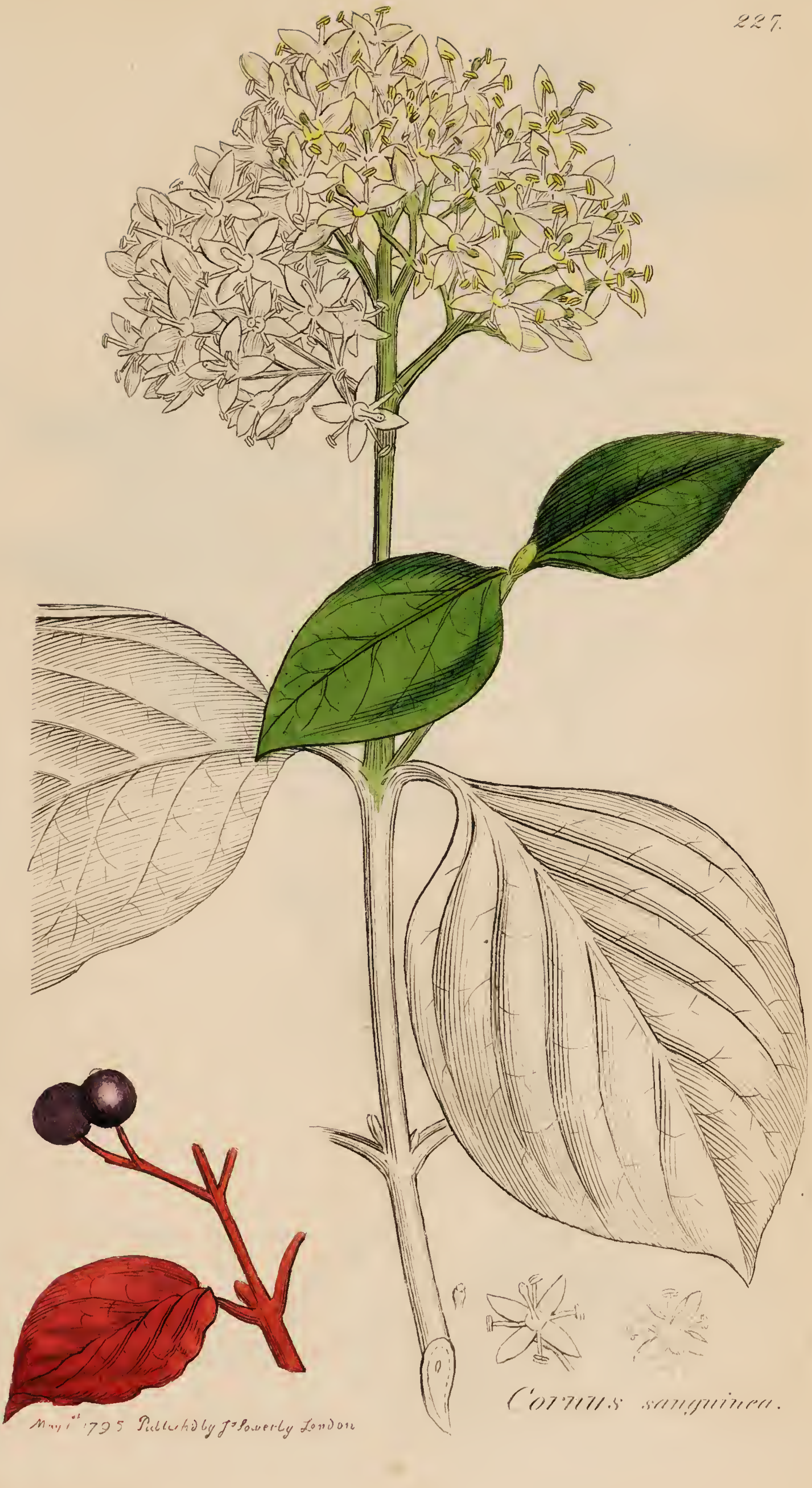


Epimedium alpinum.

[illegible] 1 1797 Publish'd by Jas Sowerby London.

249

227.

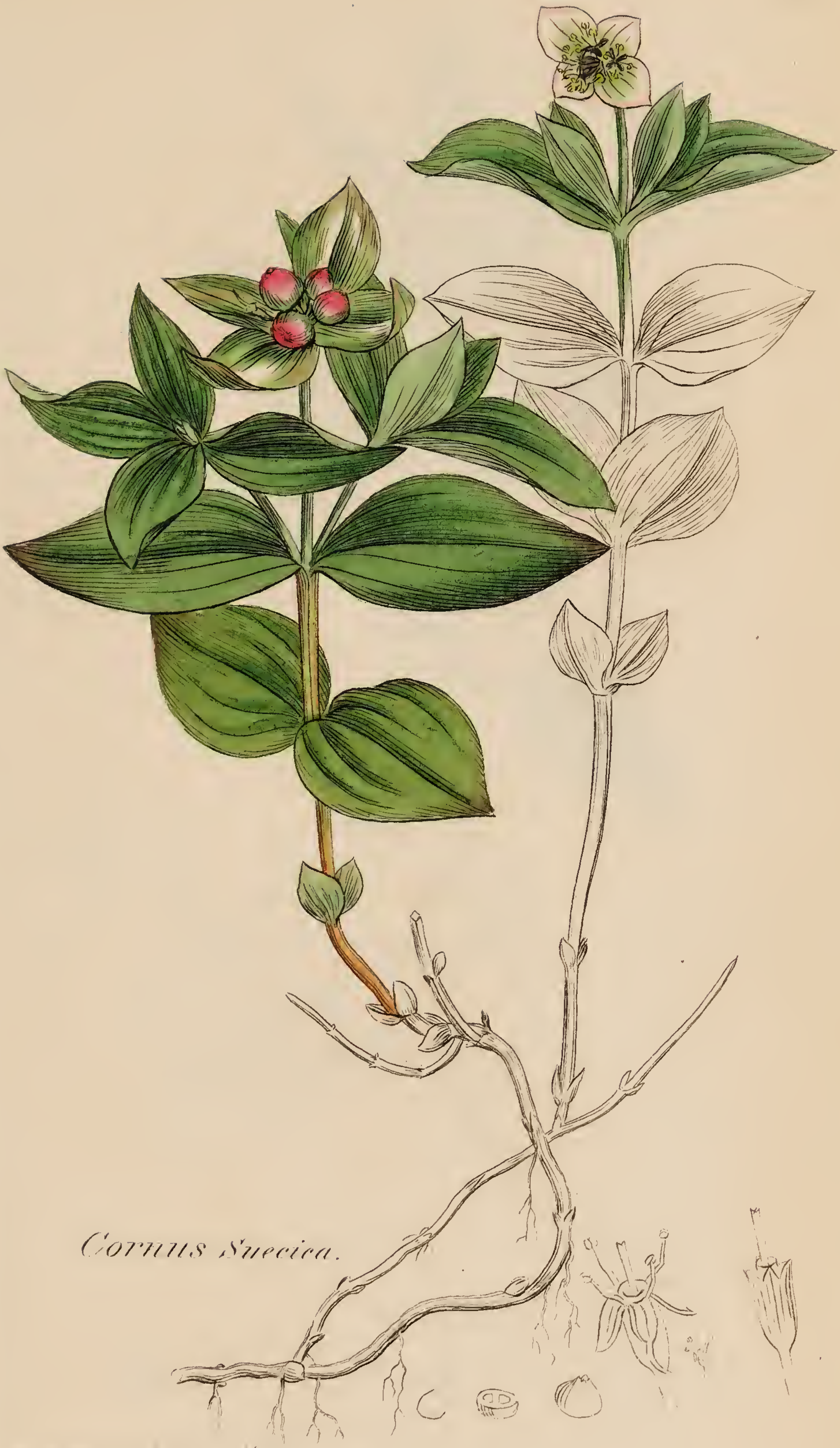


Cornus sanguinea.

May 1st 1795 Publish'd by Js Sowerby London

310

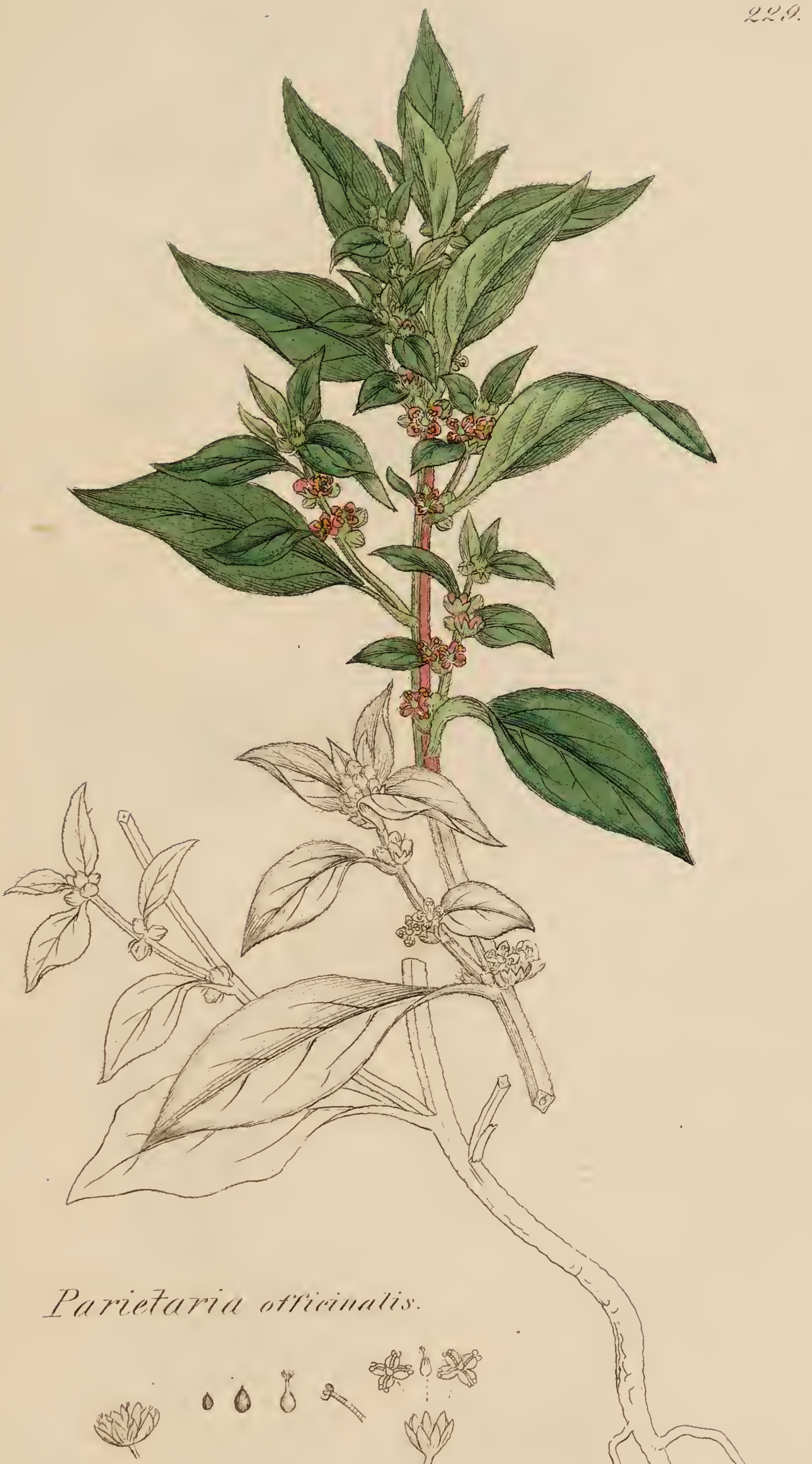
228.



Cornus Suecica.

879

229.



Parietaria officinalis.

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597.

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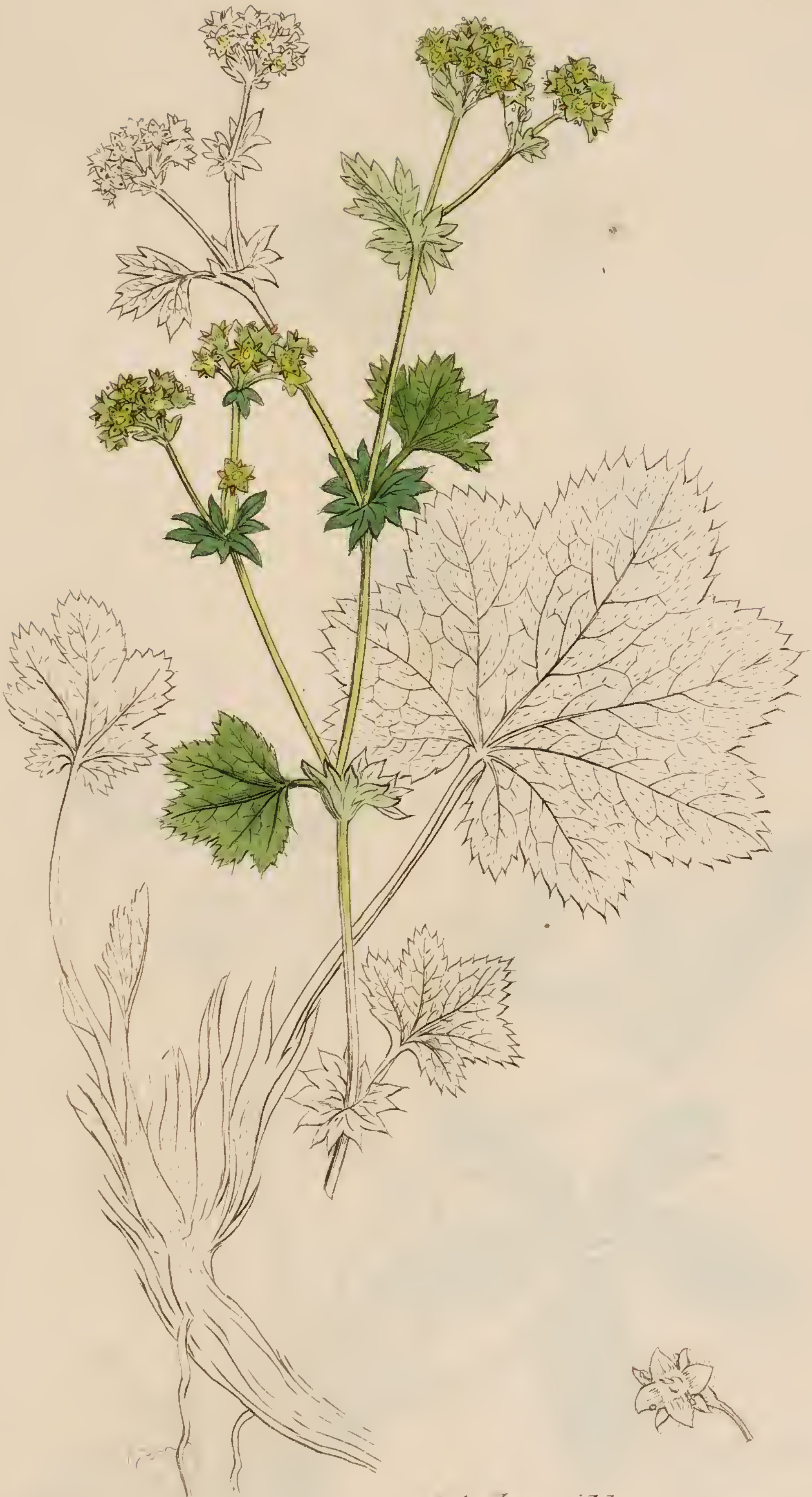

Alchemilla vulgaris.

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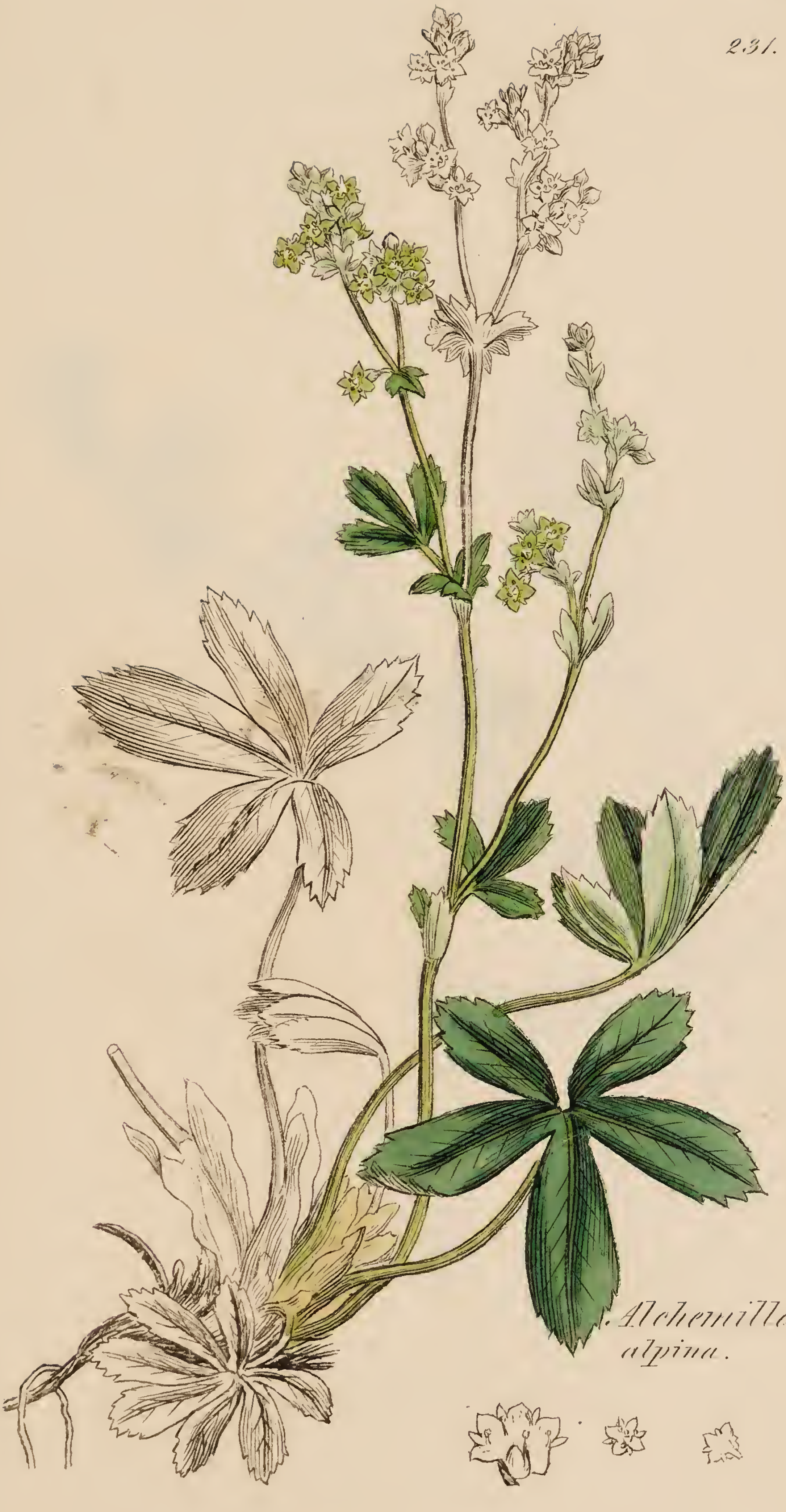
244

231.

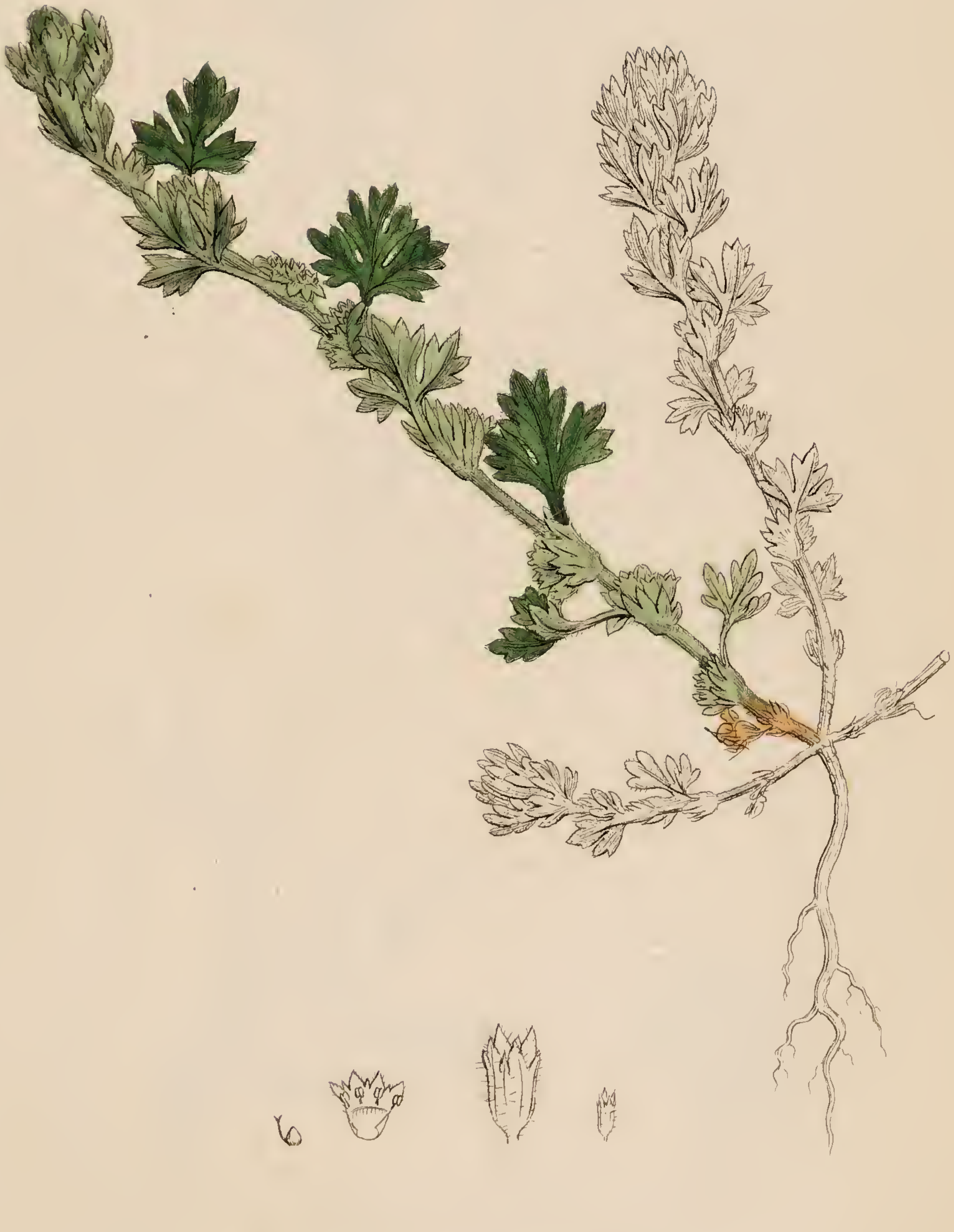


Alchemilla alpina.

April 1st 1795 Publish'd by J. Sowerby London.

1011.

232.

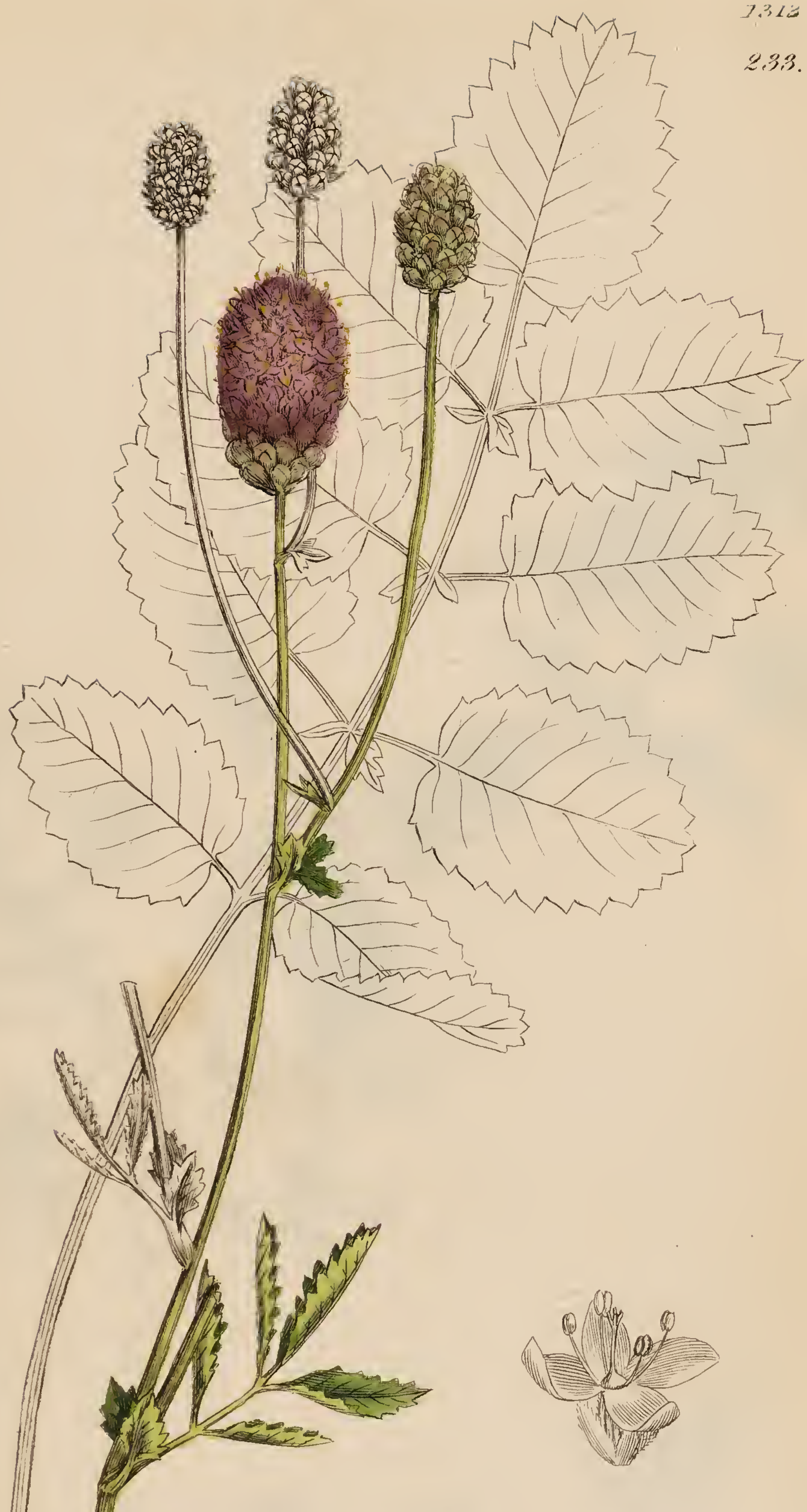


Alchemilla arvensis.

Mar. 1. 1802 Publish'd by Js. Sowerby London

1312

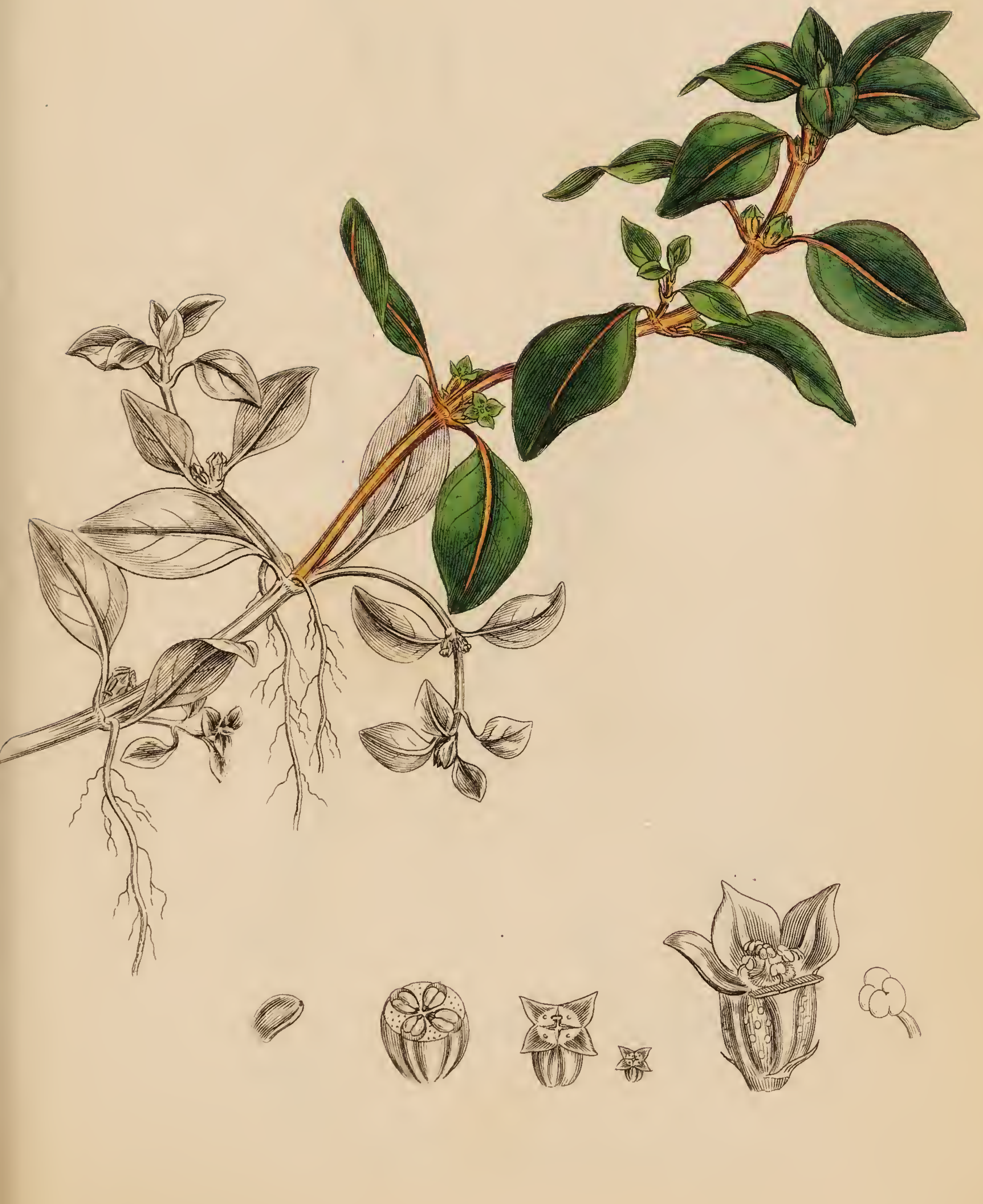
233.



Sanguisorba officinalis.

May 1 1804. Published by Jas. Sowerby London

2593.
233*



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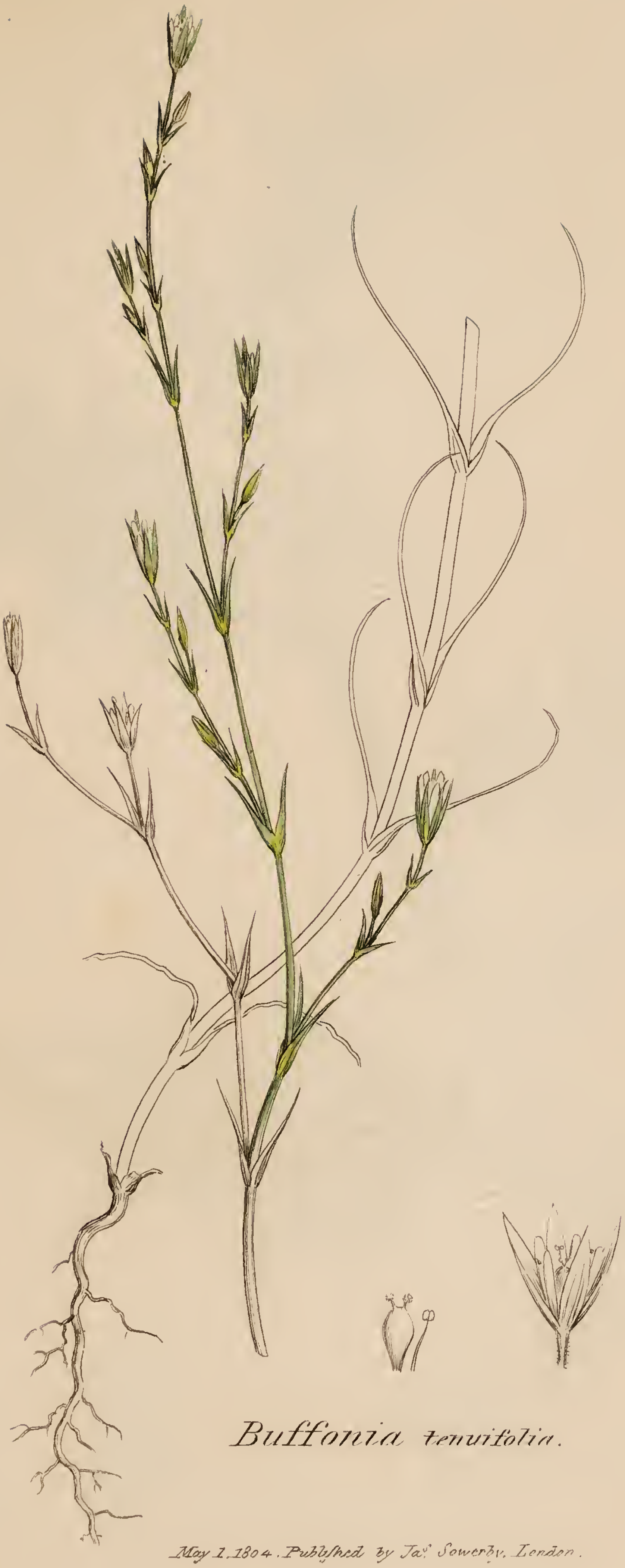
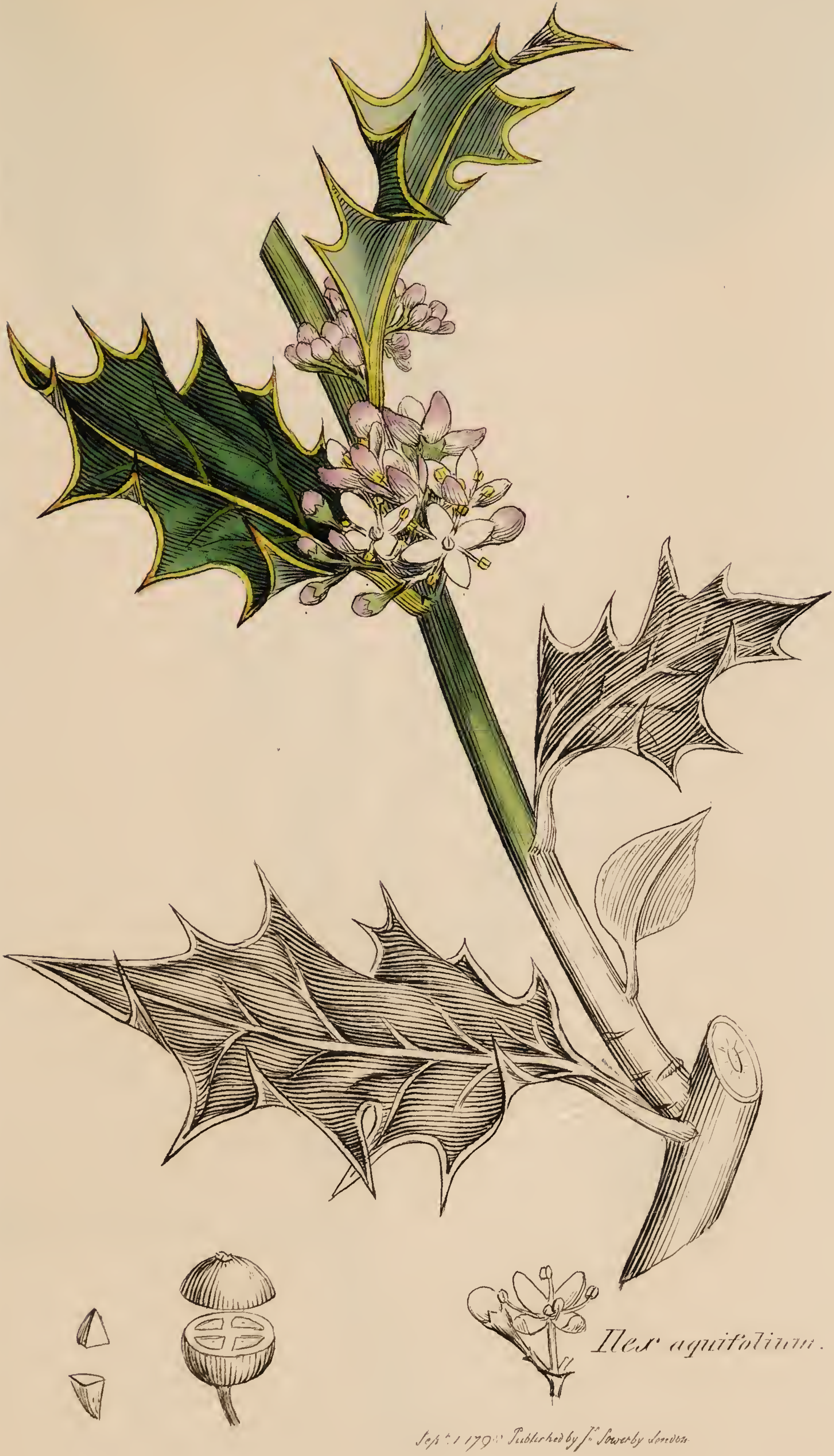


Buffonia tenuifolia.

May 1. 1804. Published by Jas. Sowerby, London.

496.

235.

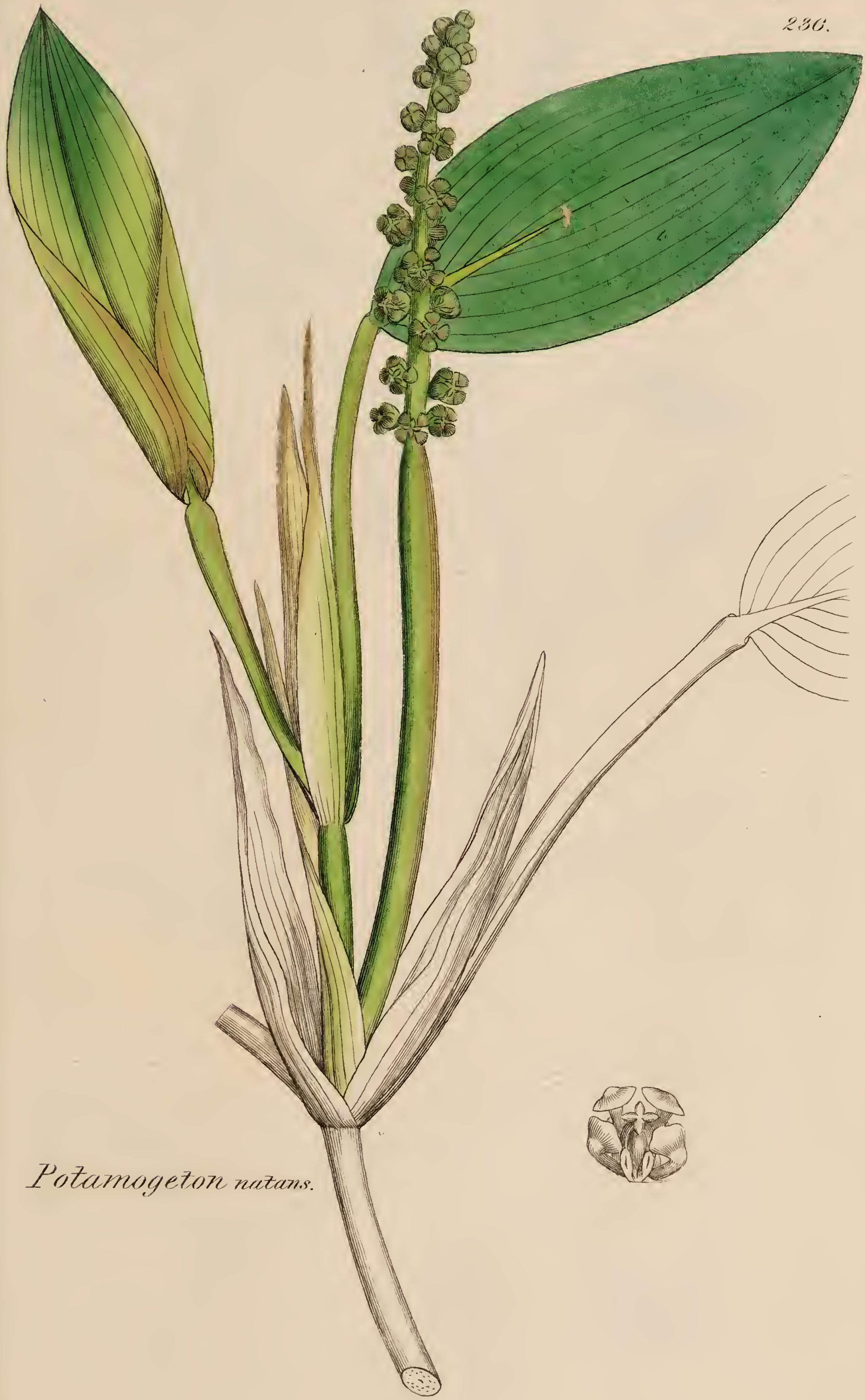


Ilex aquifolium.

Sept. 1 1798 Published by J.s Sowerby London

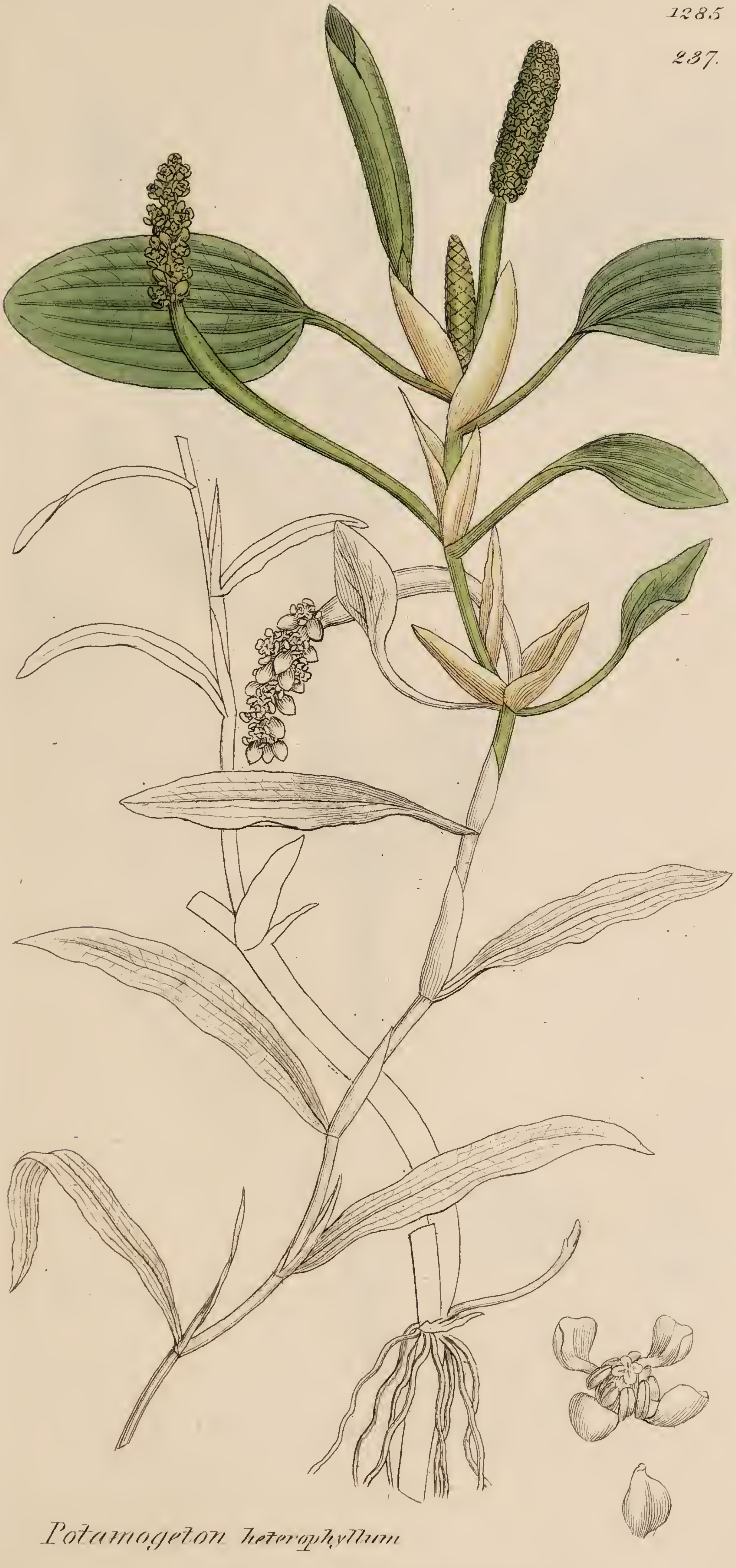
1822

236.



Potamogeton natans.

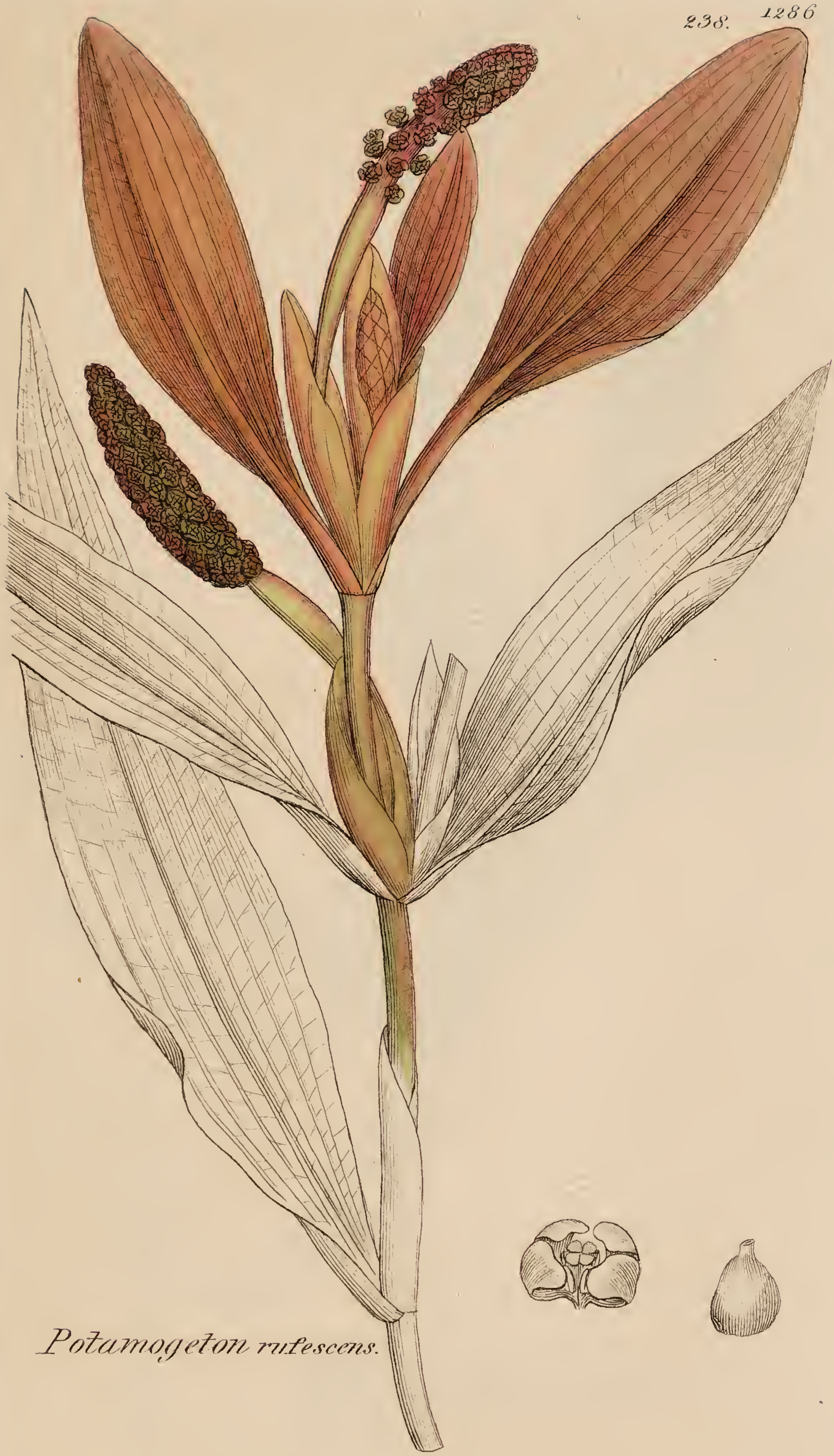
Dec.1.1807. Publish'd by Jas. Sowerby, London.



Potamogeton heterophyllum

March 1. 1804. Published by Jas. Sowerby. London.

238. 1286

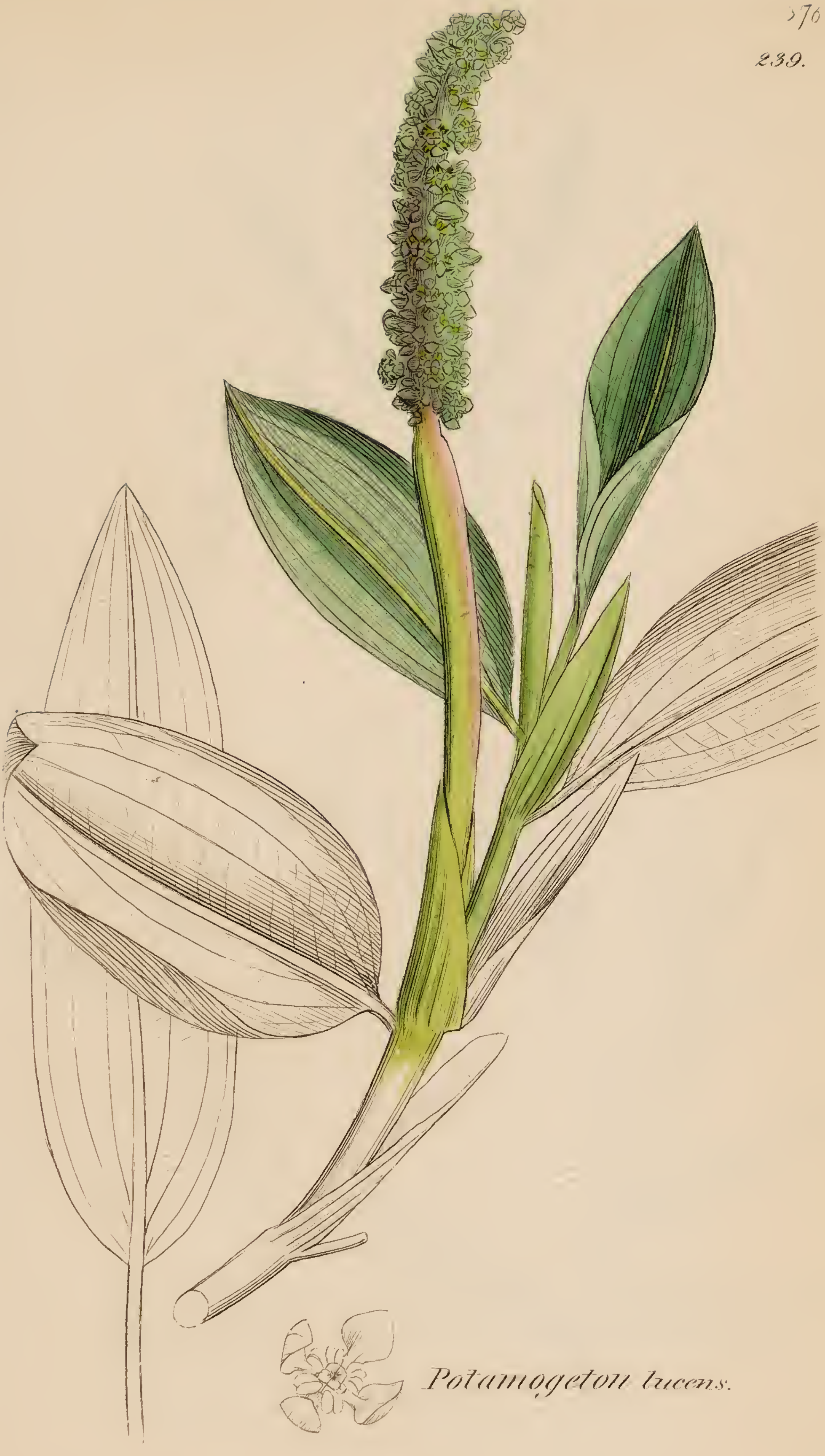


Potamogeton rufescens.

March 1 1804. Published by Jas. Sowerby. London.

576

239.

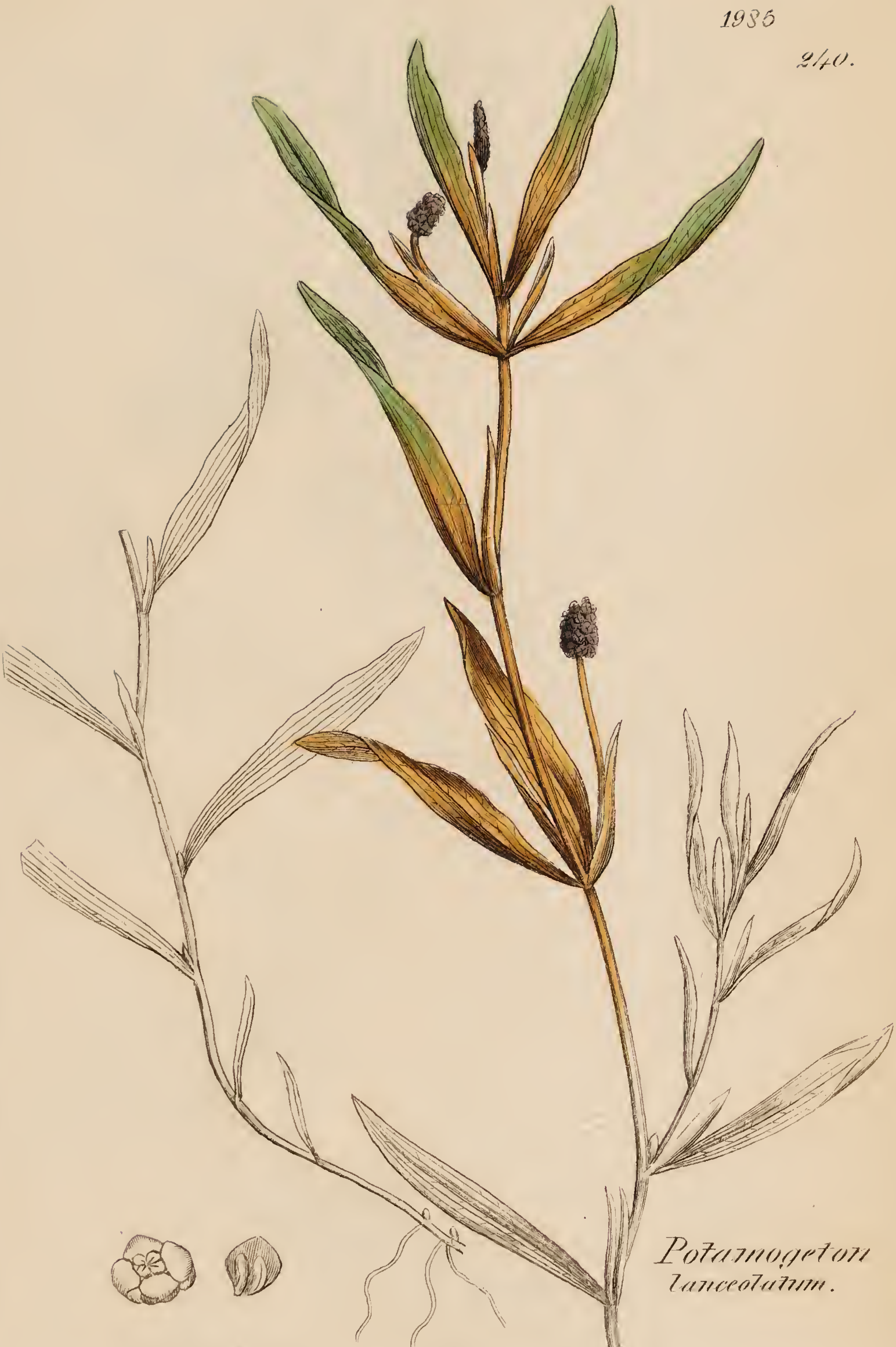


Potamogeton lucens.

[illegible] Sowerby [illegible]

1985

240.

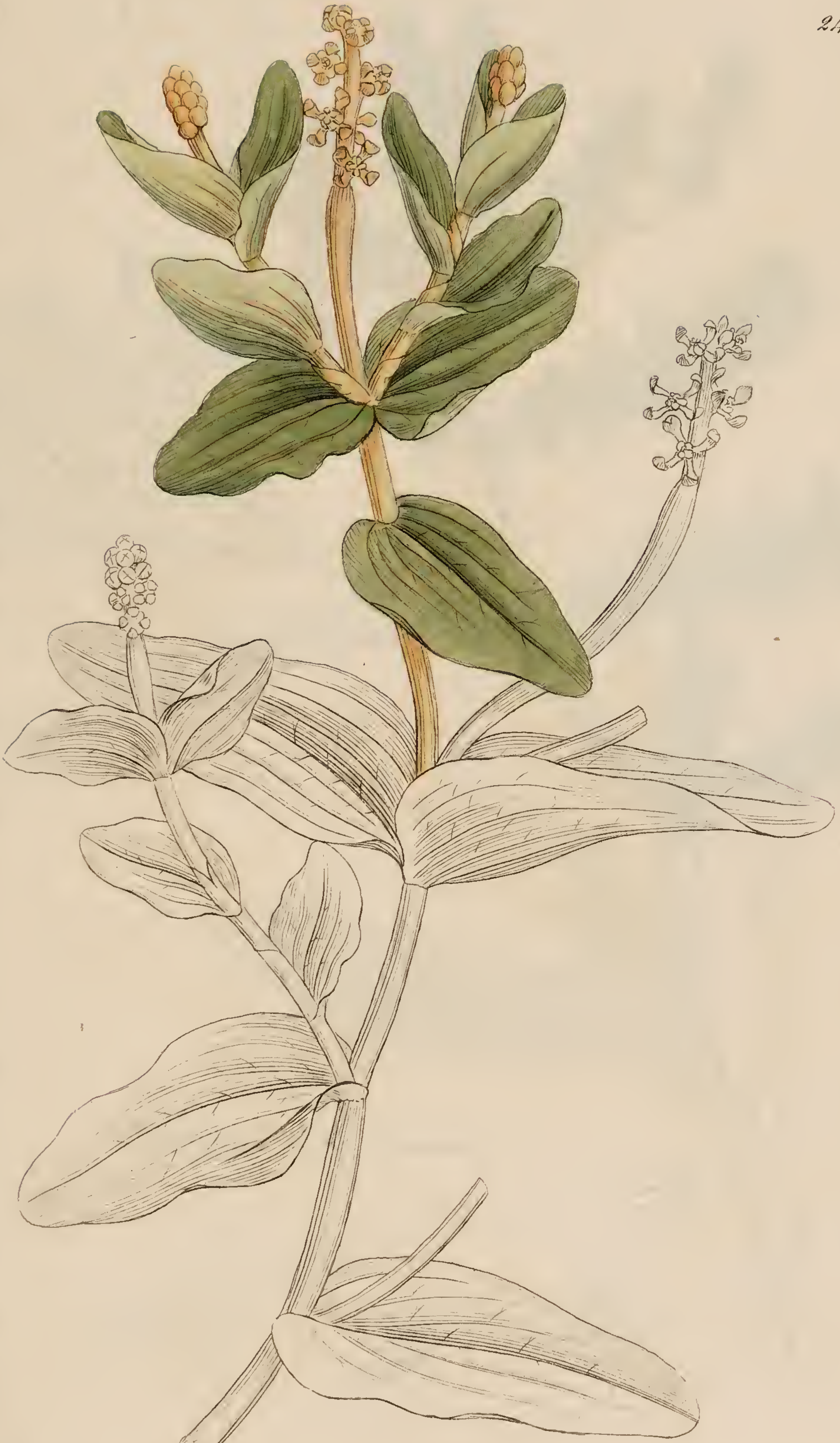


Potamogeton
lanceolatum.

Feb. 1 1809 Publish'd by Jas. Sowerby London

168.

241.

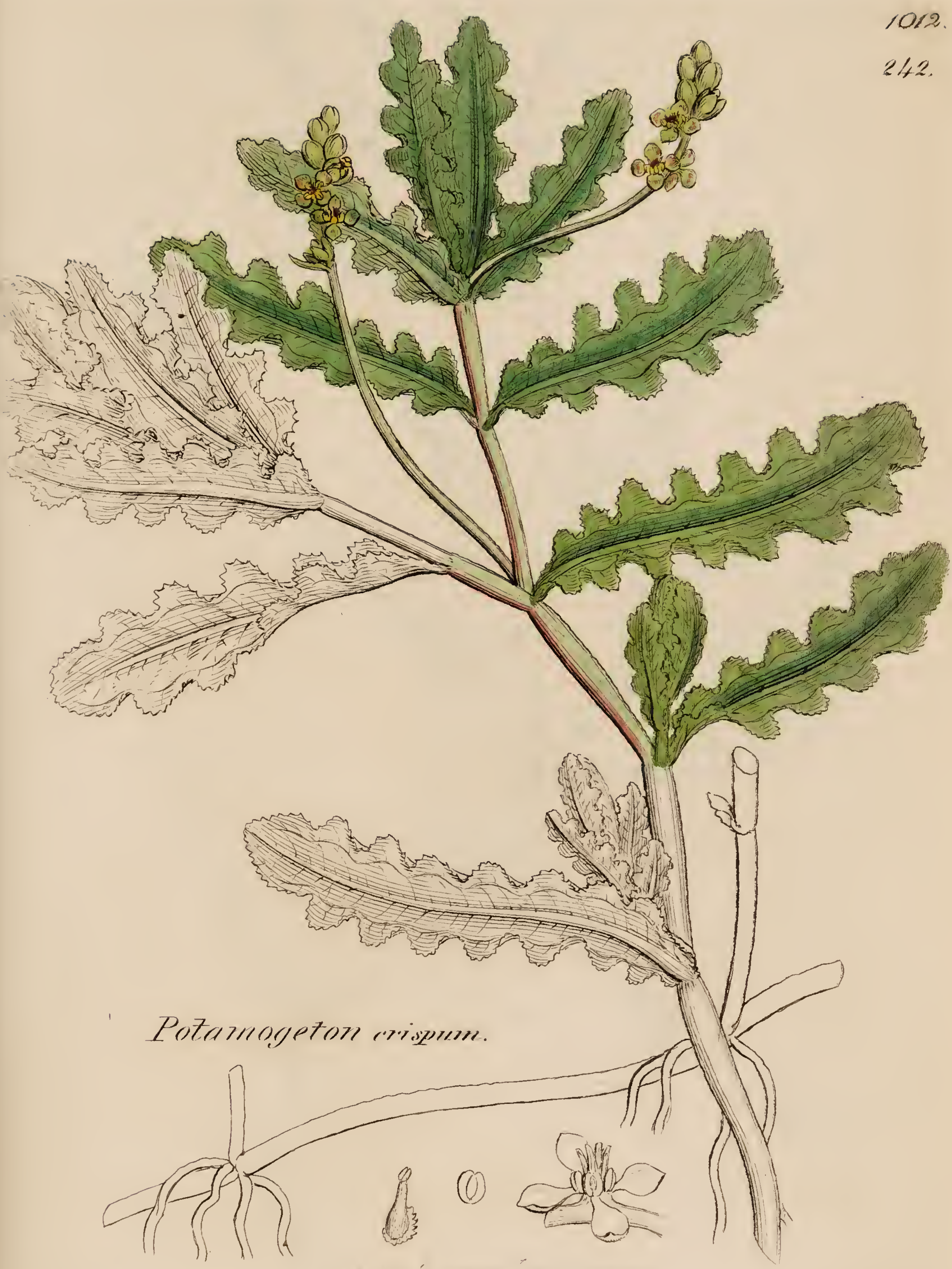


Potamogeton perfoliatum.

J. Sowerby delt. Apl 1 1794

1012.

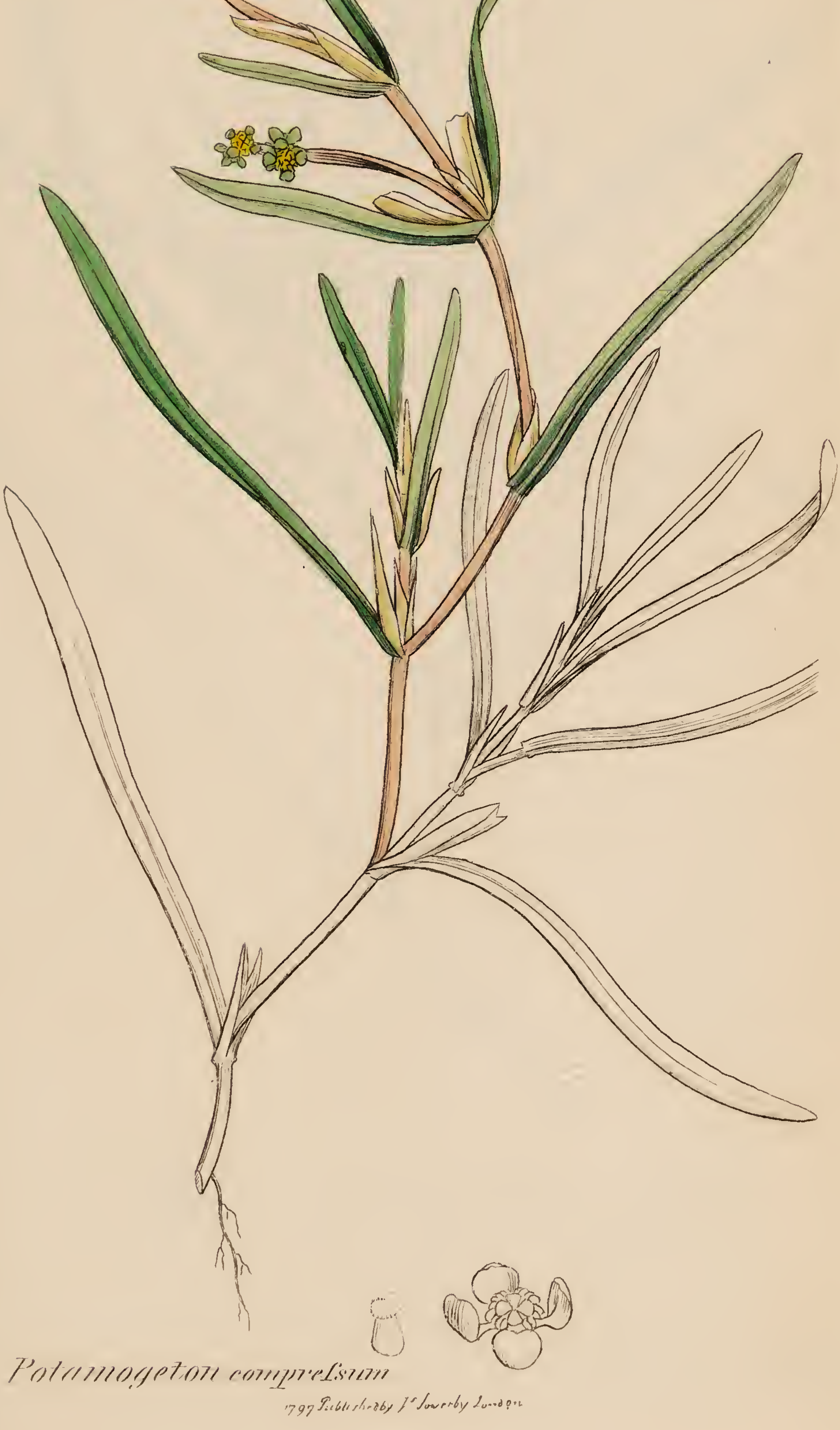
242.



Potamogeton crispum.

418.

248.

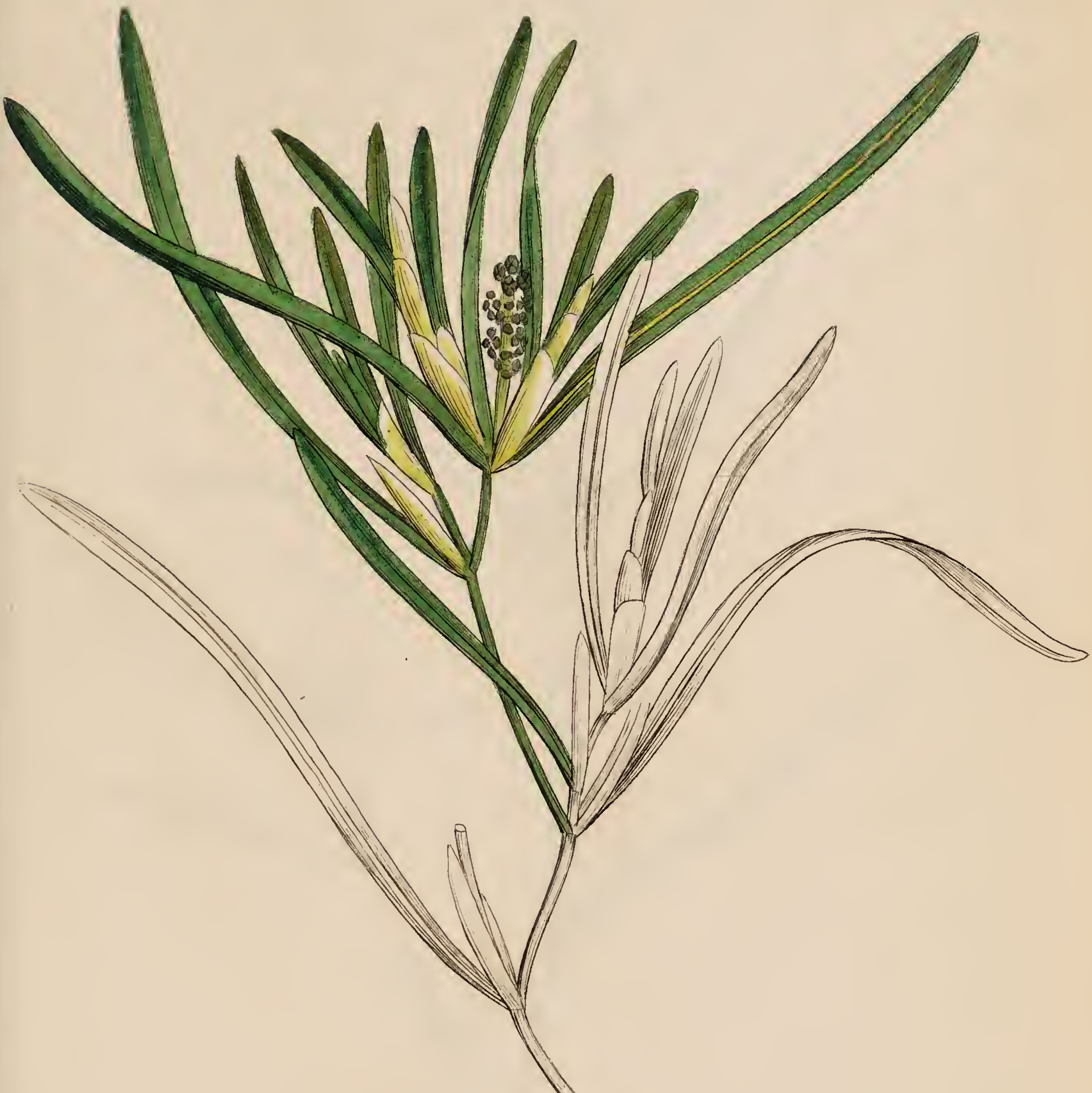


Potamogeton compreſsum

1797 Publish'd by J. Sowerby London

2253

244

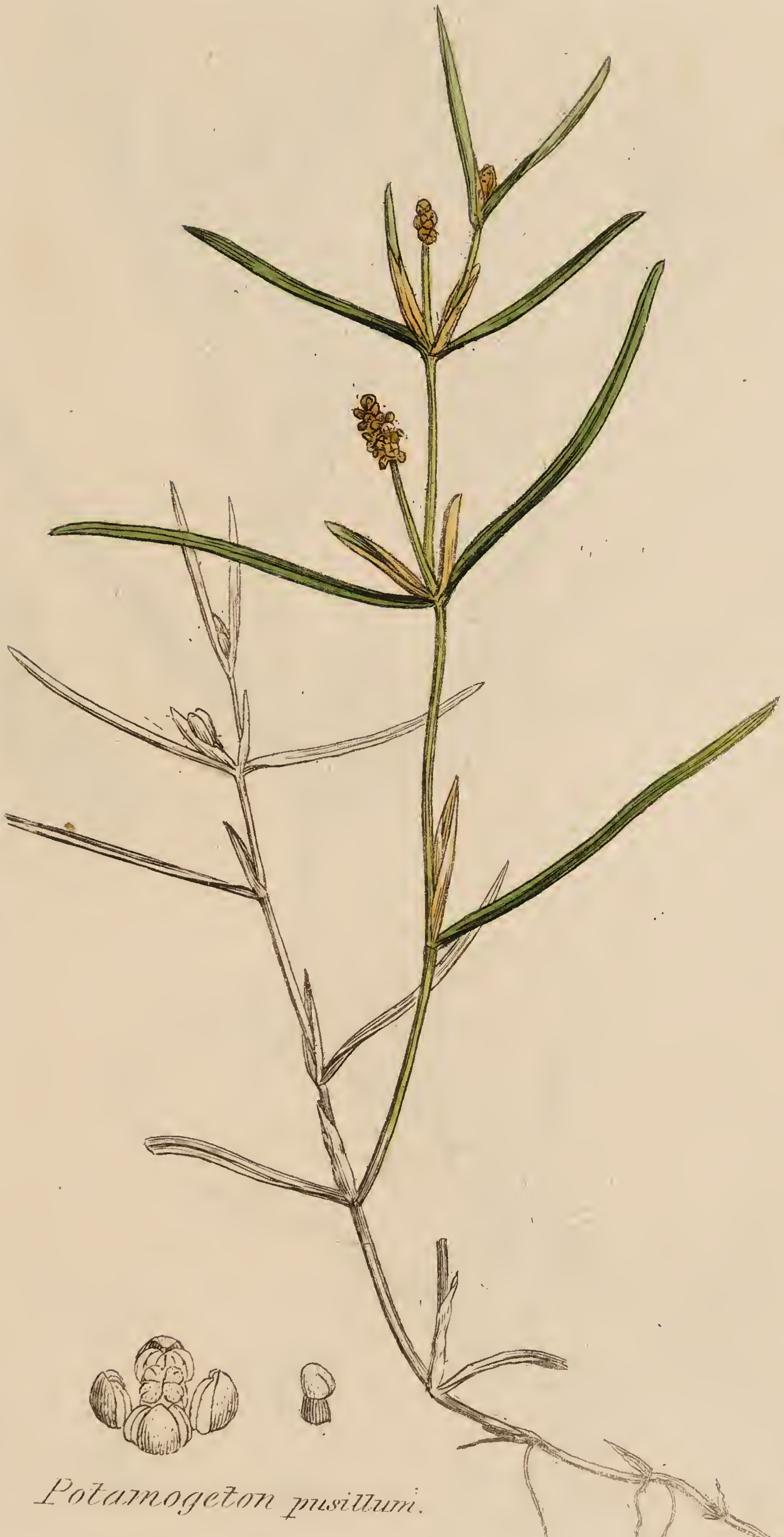


Potamogeton gramineum.

Mar. 1. 1811 published by Jas. Sowerby London.

215.

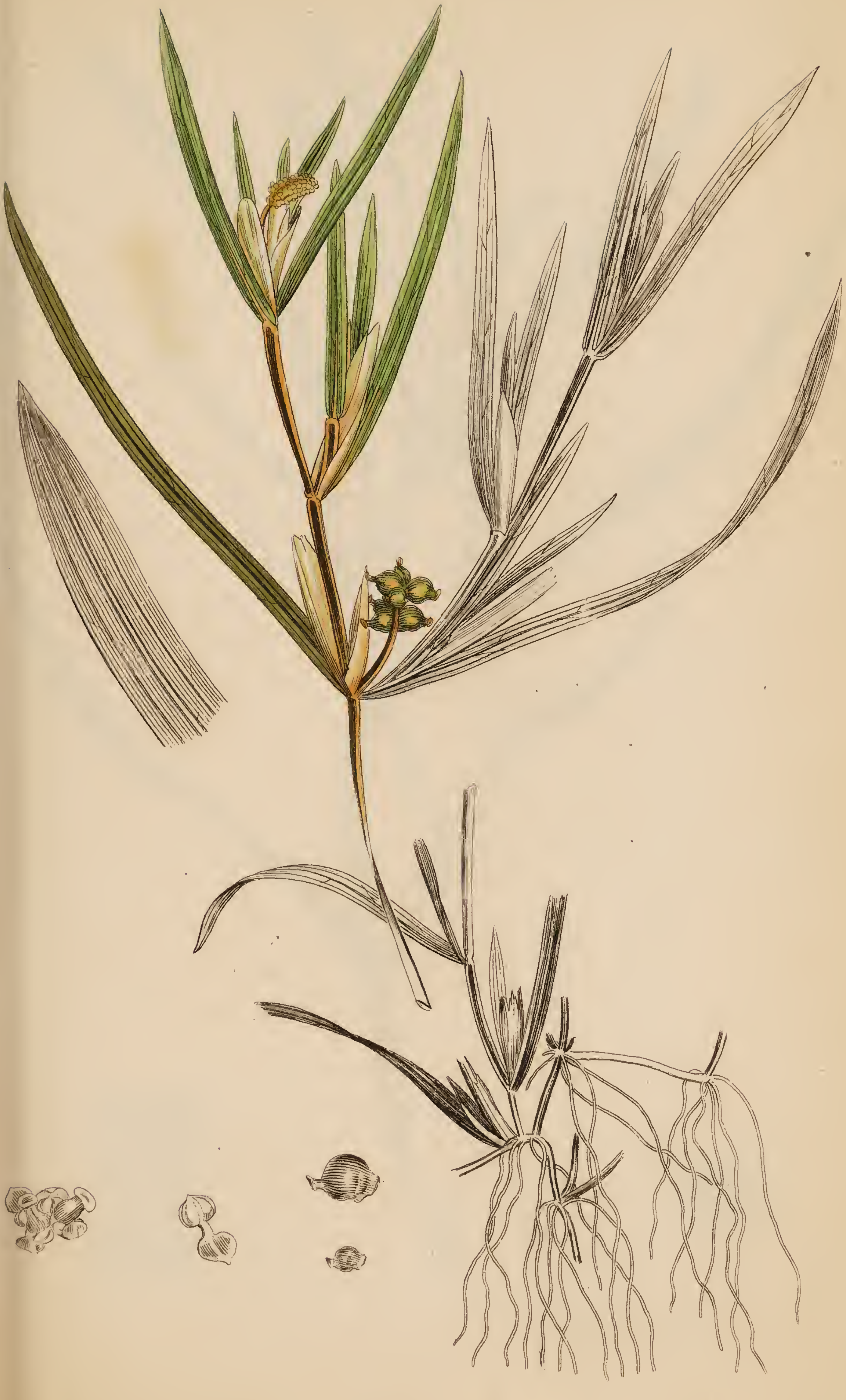
245.



Potamogeton pusillum.

Novr 1 1794 Publish'd by J. Sowerby London.

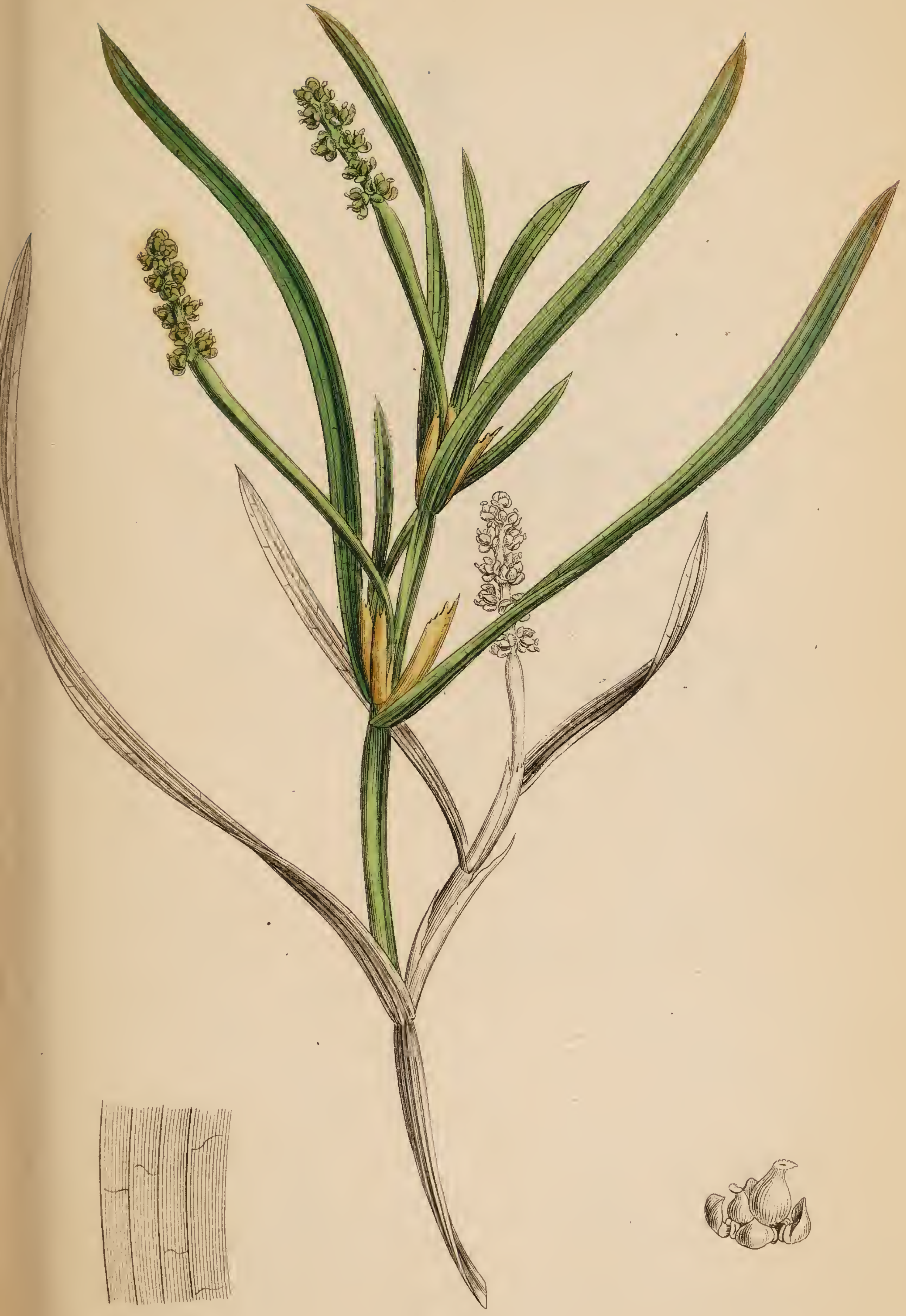
2609.



November 1st 1829.

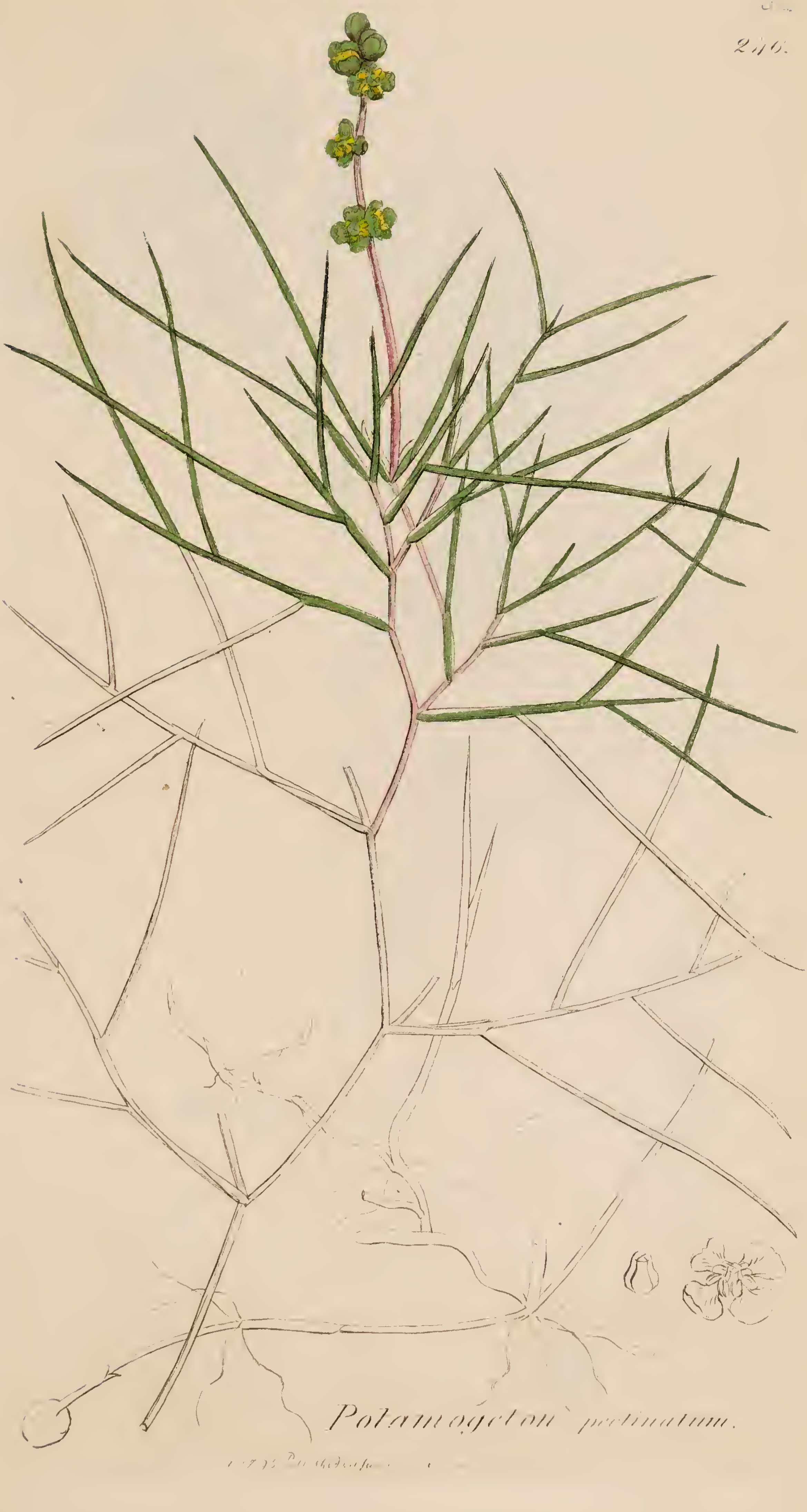
2685.

245**



March 1st 1837.

246.

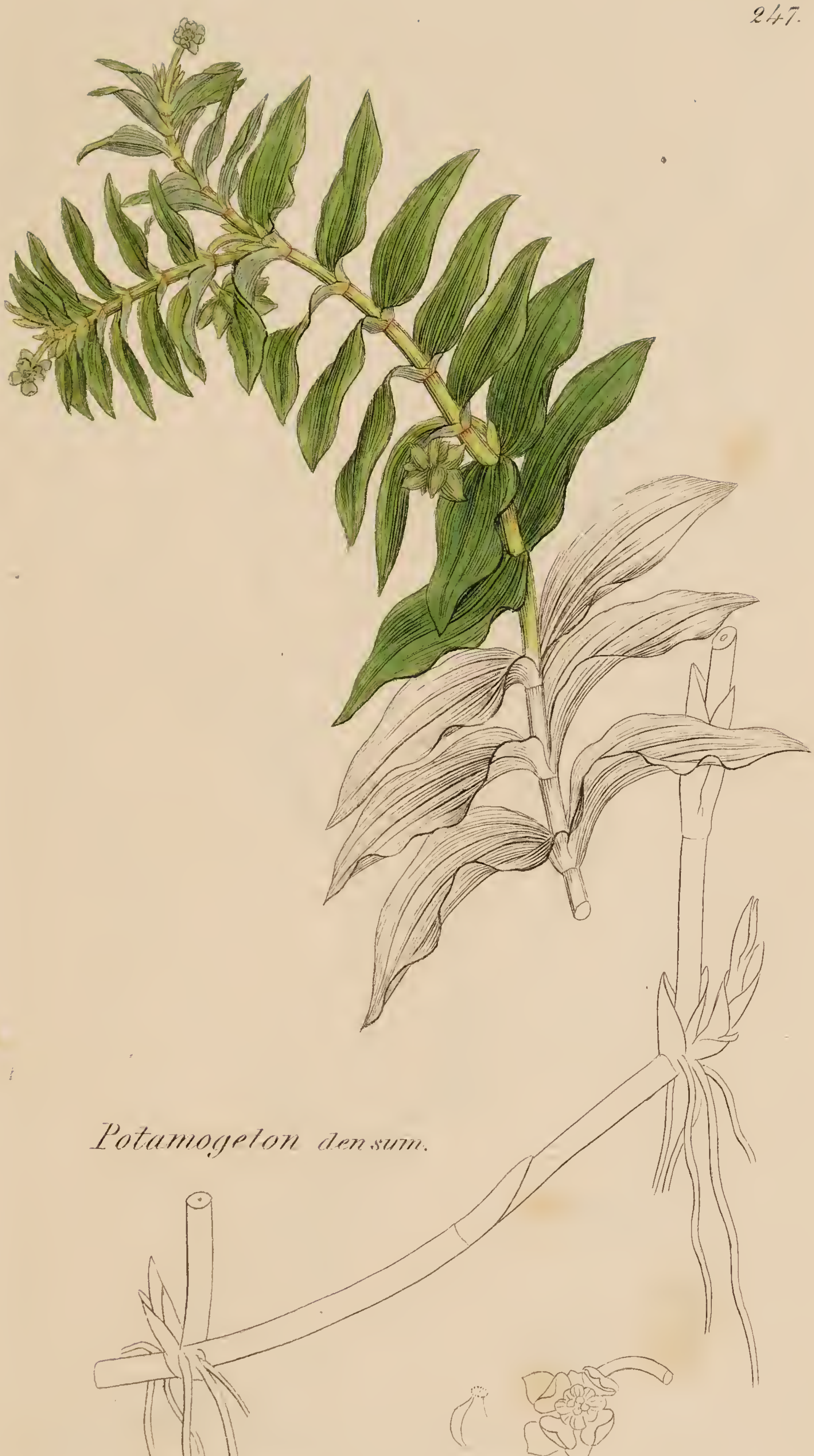


Potamogeton pectinatum.

179[illegible] Pub[illegible]

397

247.

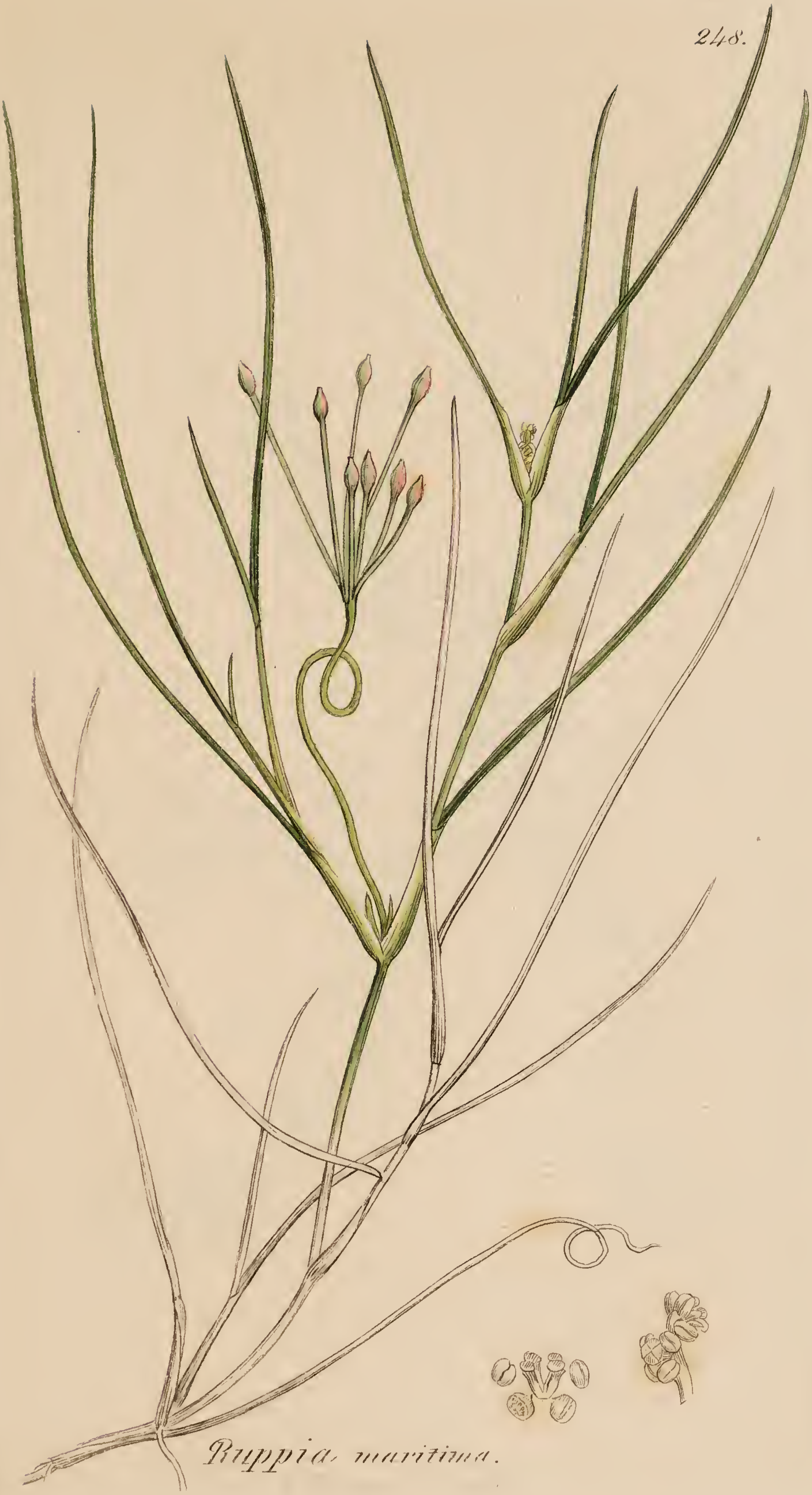


Potamogeton densum.

May 1st 1797 Published by J. Sowerby London

130

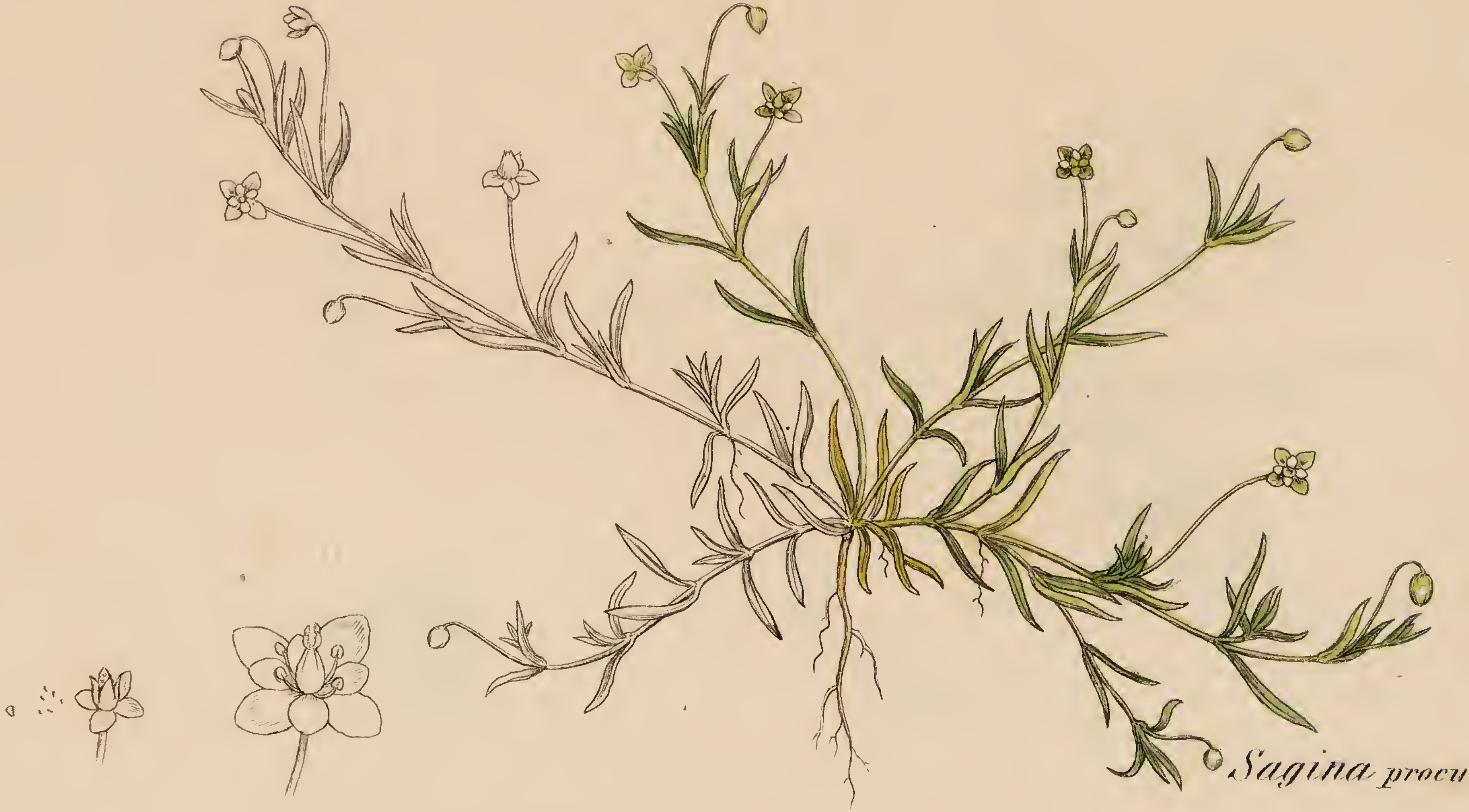
248.



Ruppia maritima.

880.

249.

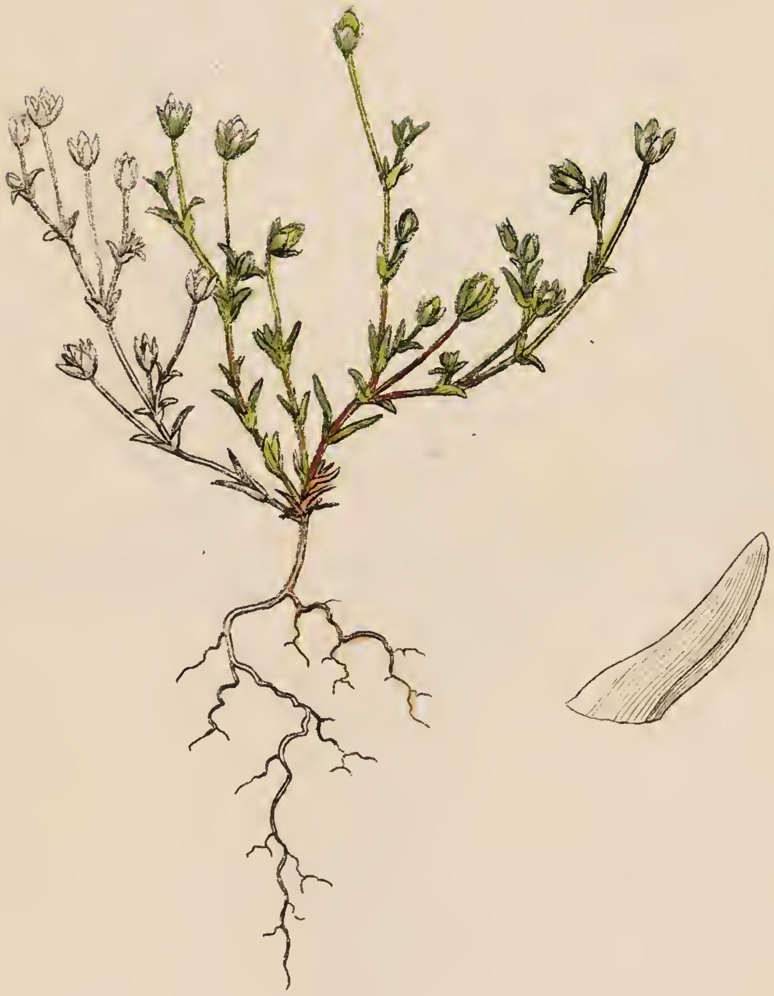


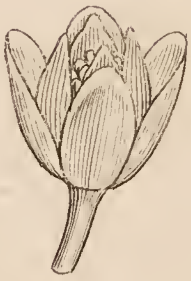
Sagina procumbens.

r 1. 1801 Publish'd by J. Sowerby London.

2195.

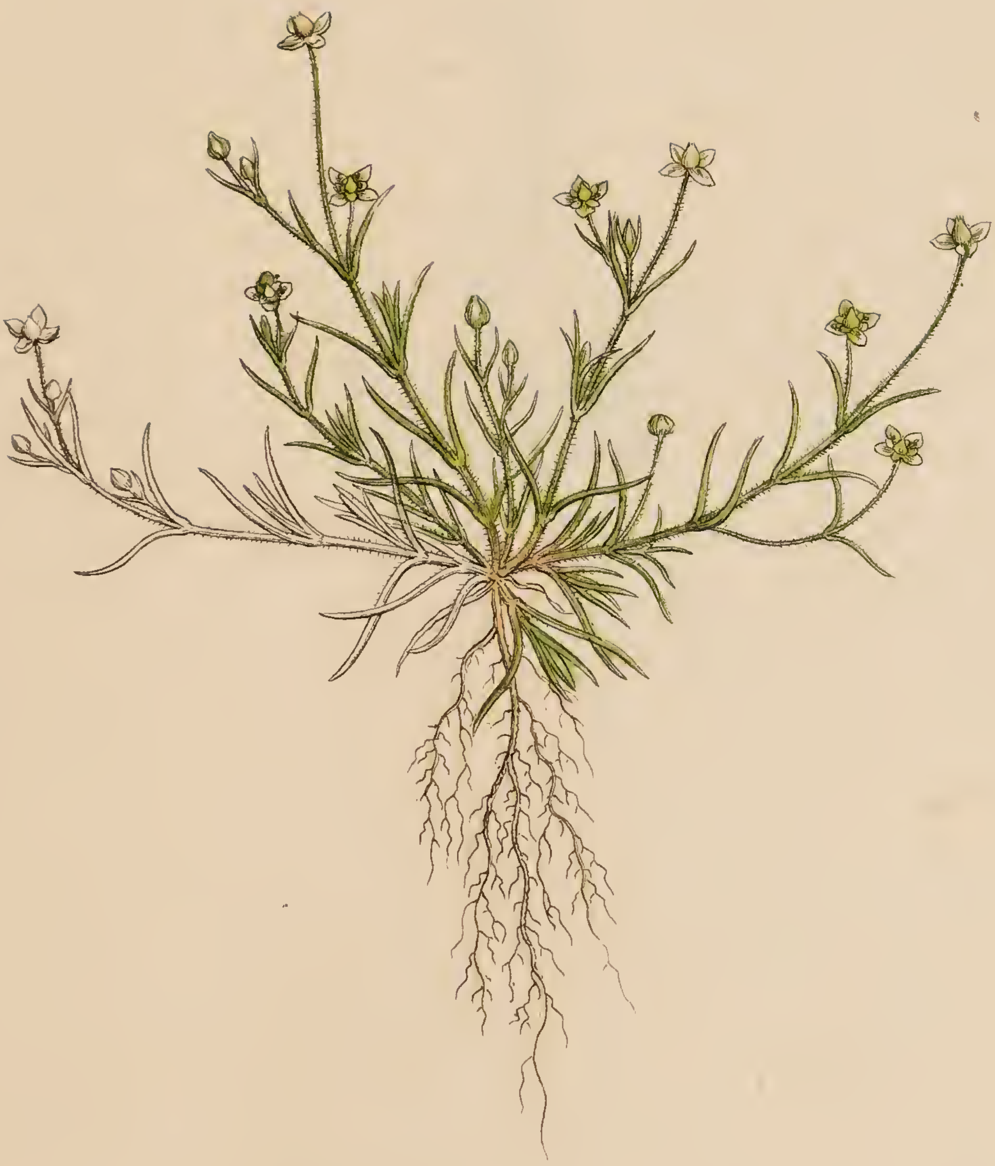
250.

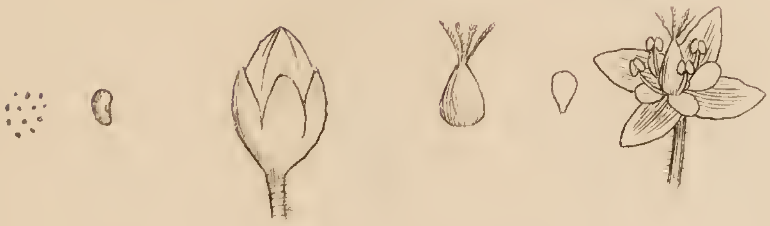




Sagina maritima.

1810 published by Jas. Sowerby London.



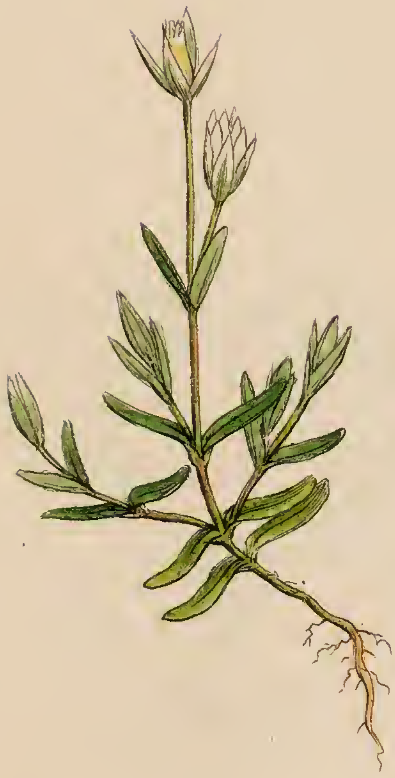


Sagina apetala.

[illegible] 1.1801 Sutt [illegible]

609

252.

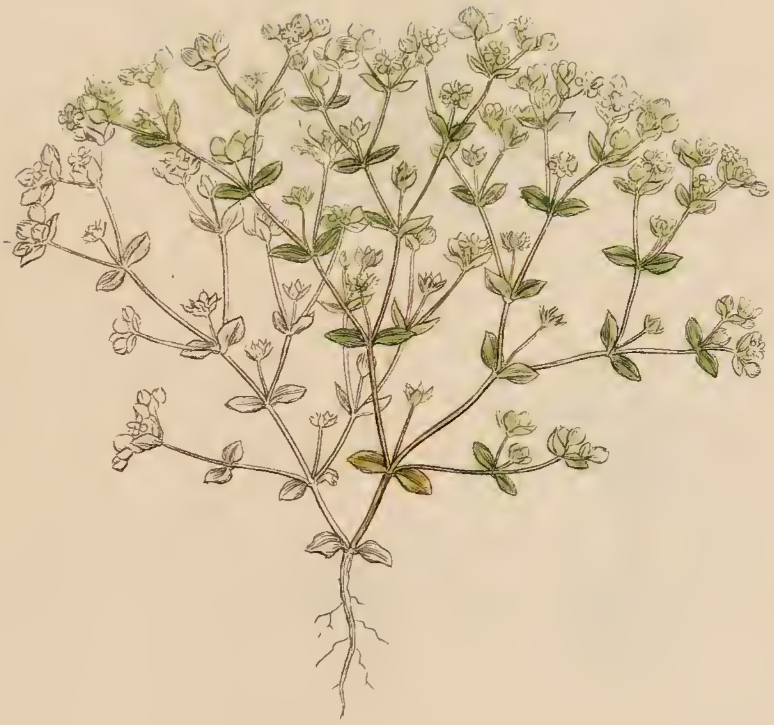


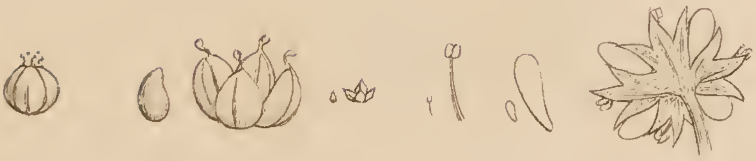
Mœnchia erecta.

[illegible] 1.1795 Pub. [illegible] Sowerby [illegible]

893.

2.53.

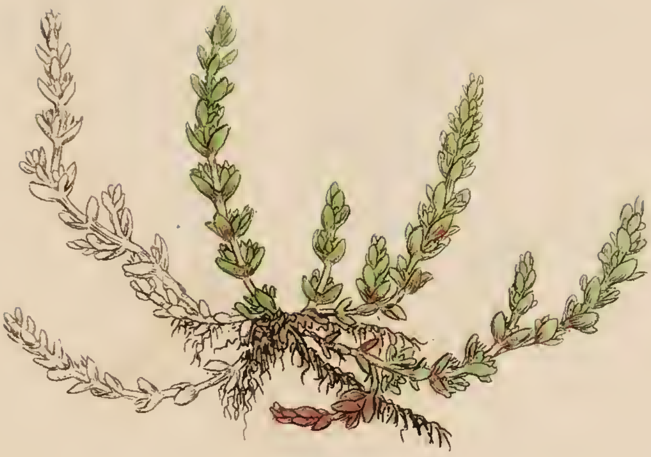


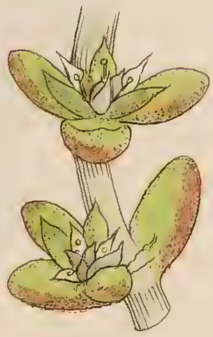


Radiola millegrana.

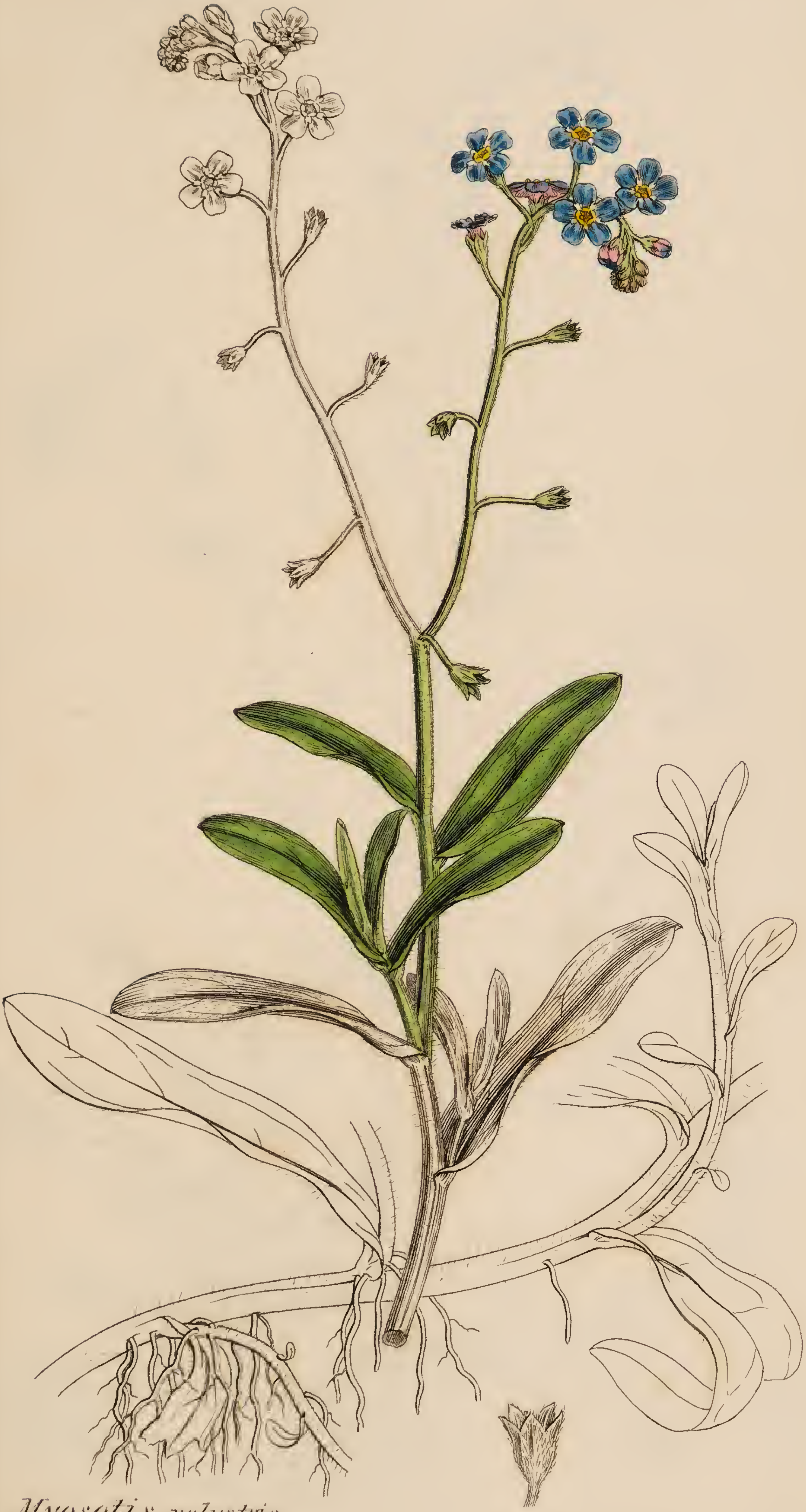
110.

254.



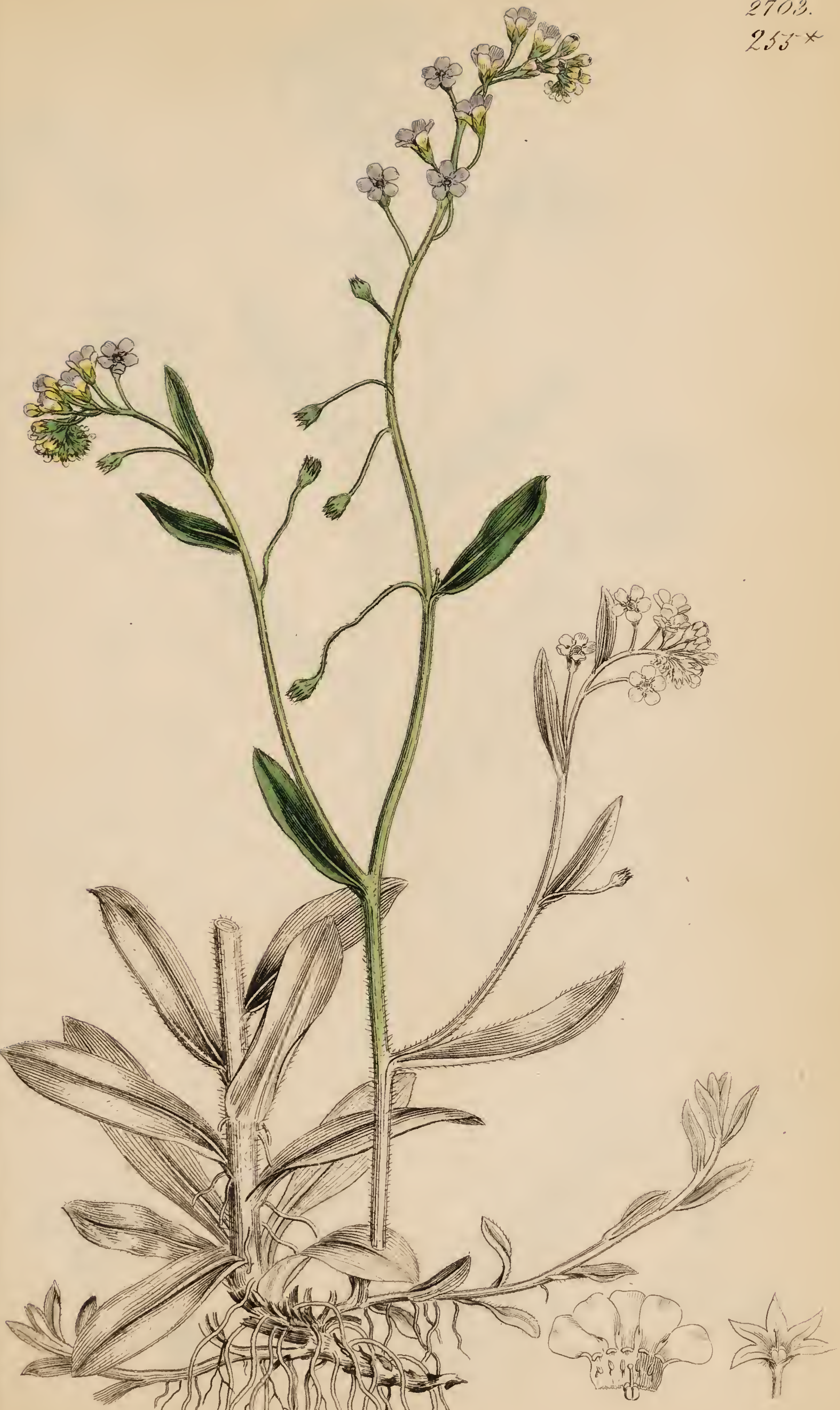


Tillæa muscosa.



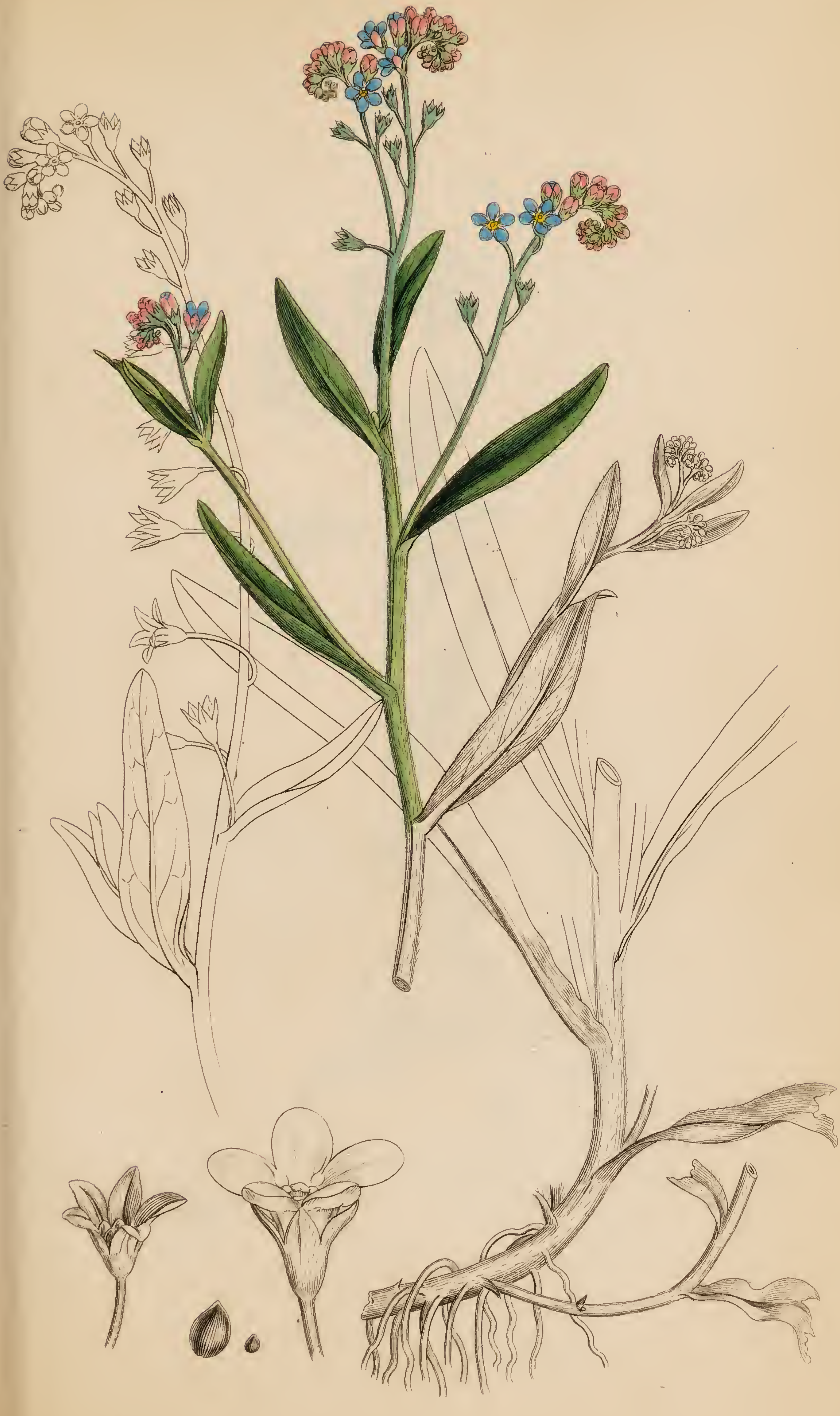
Myosotis palustris.

2703.
255*



August 1st 1837.

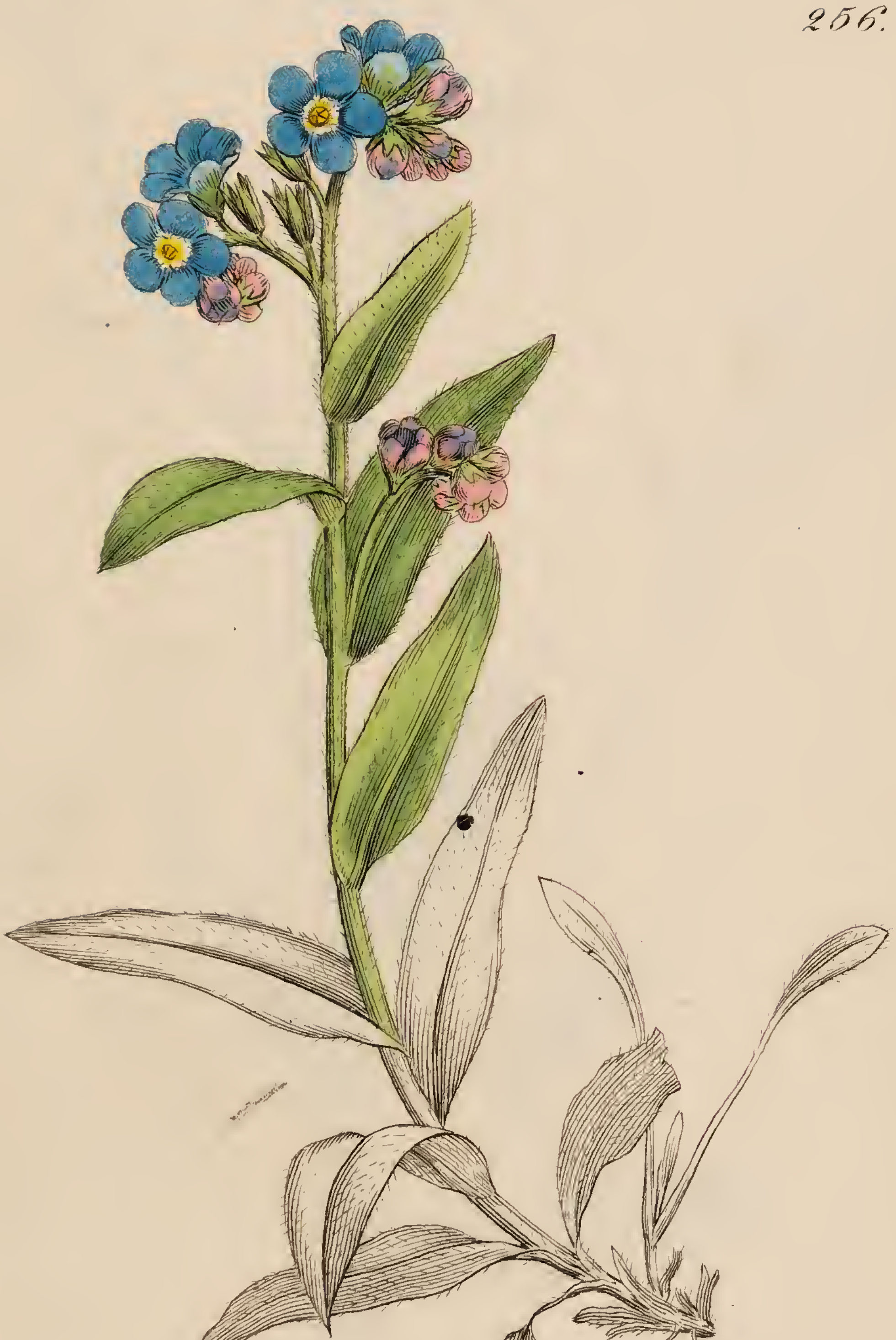
2661.



October 1st 1830.

2559

256.

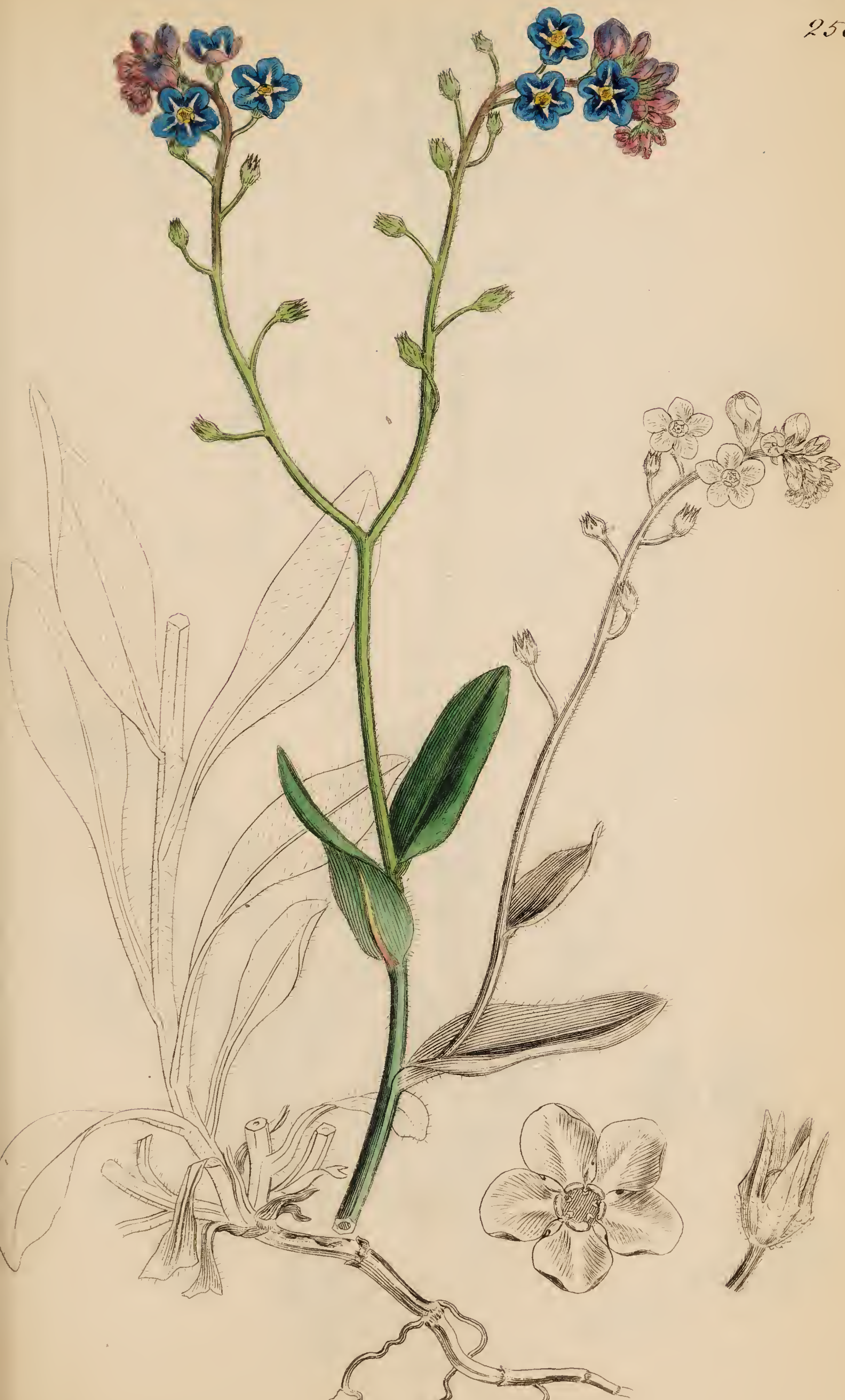


Myosotis alpestris.

[illegible] 1. 1813 published by Jas. Sowerby London.

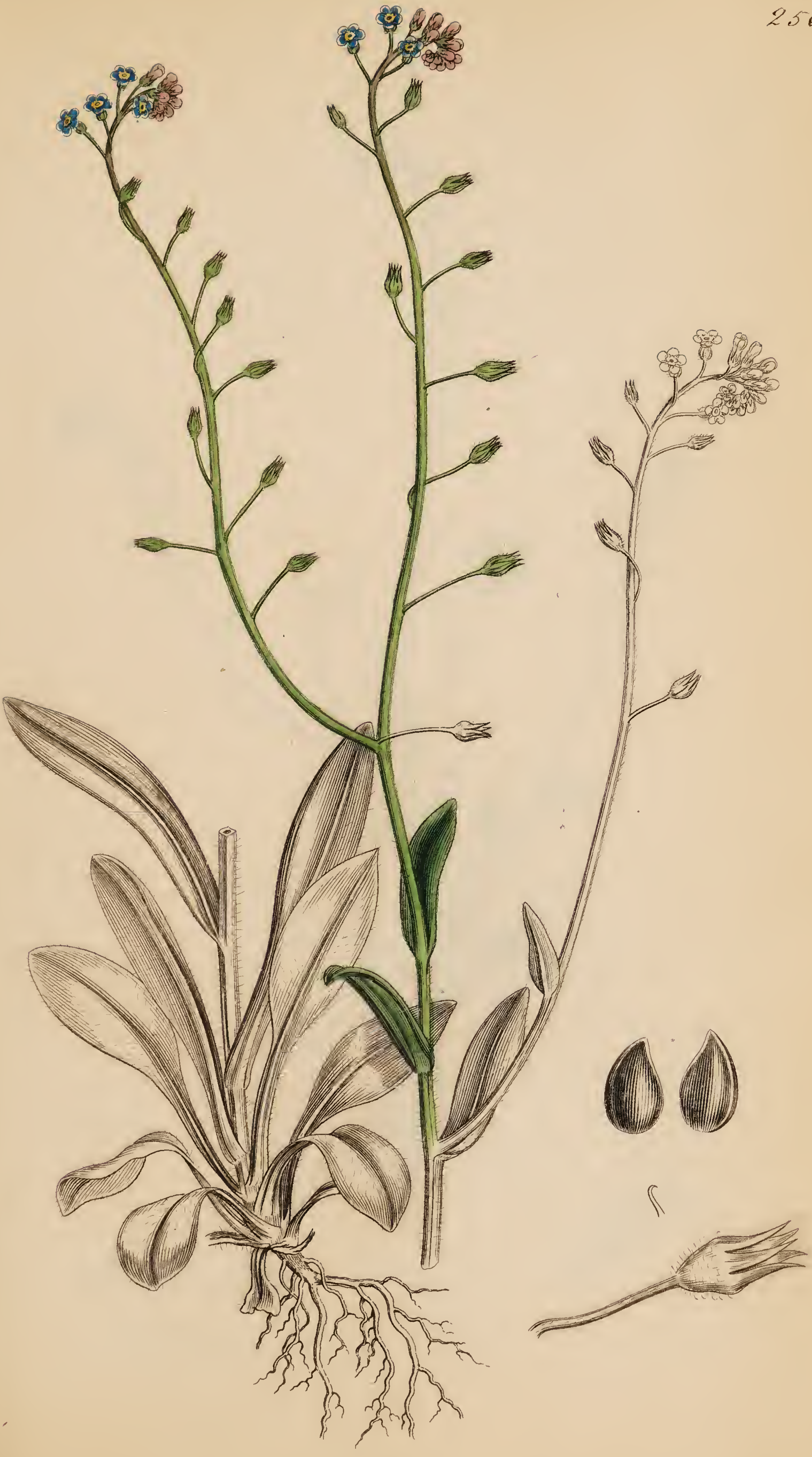
2630

256*



March 1st 1830.

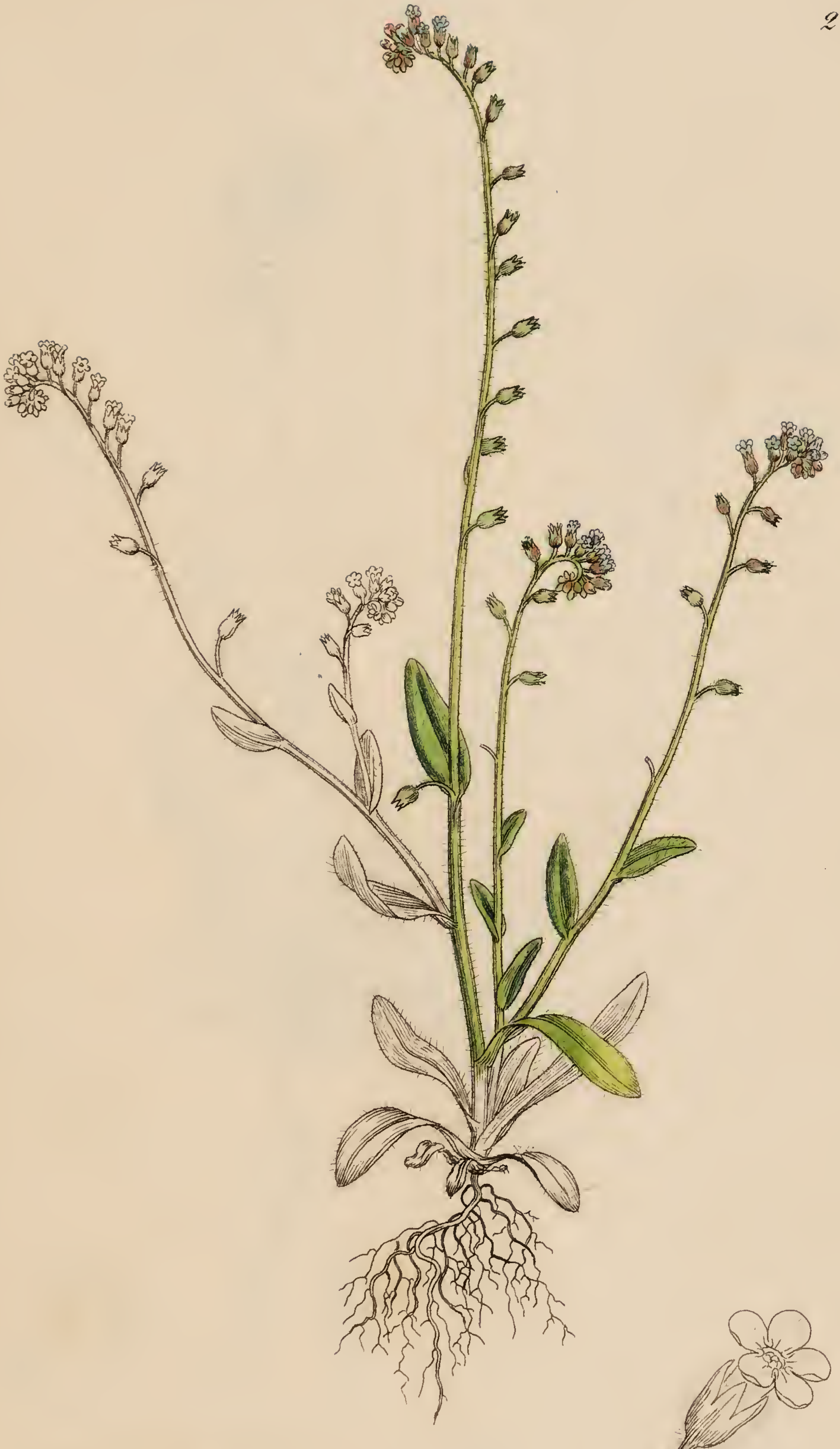
2629.
256**



March 1st 1830.

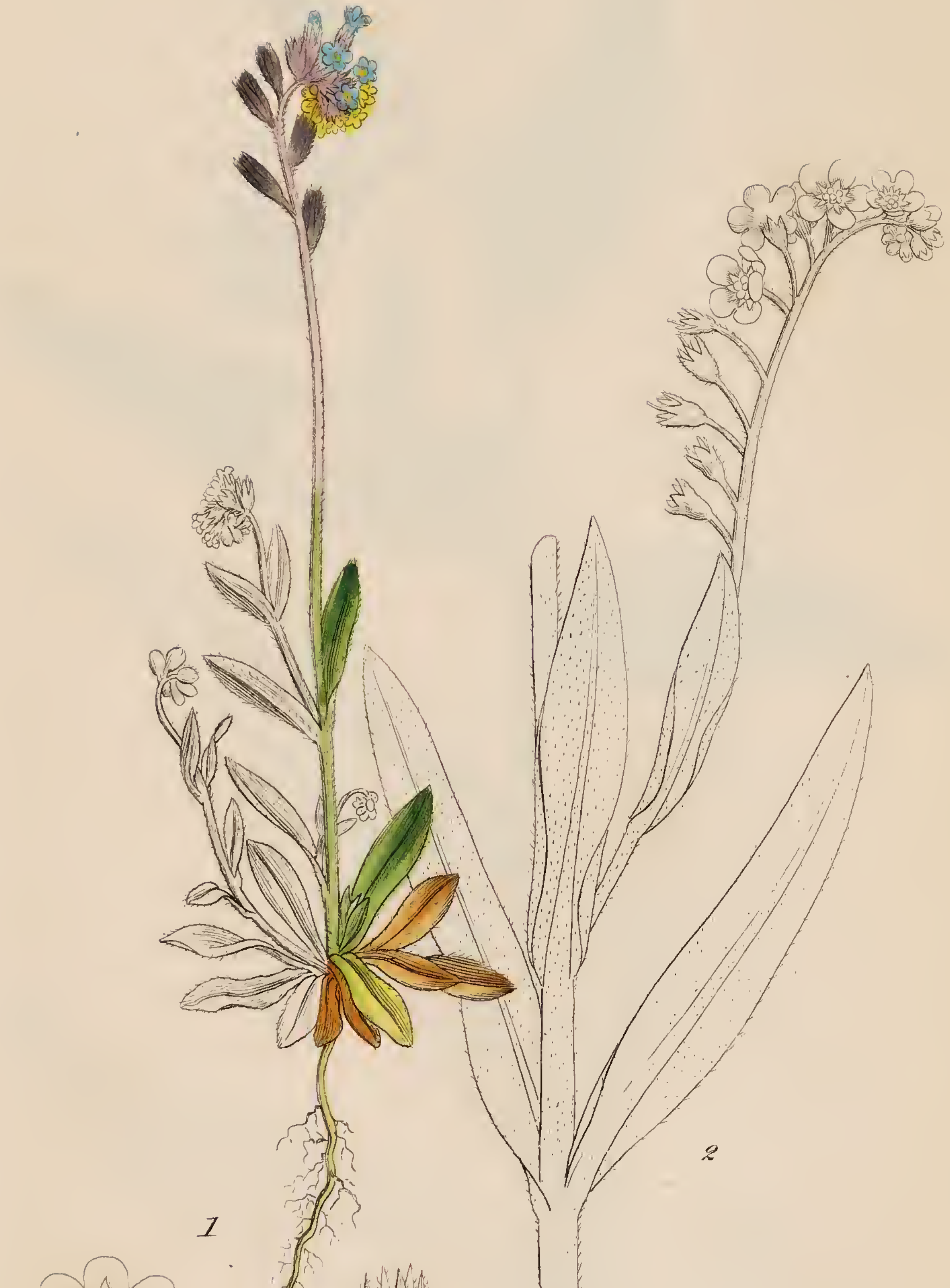
2.558

257.



Myosotis collina.

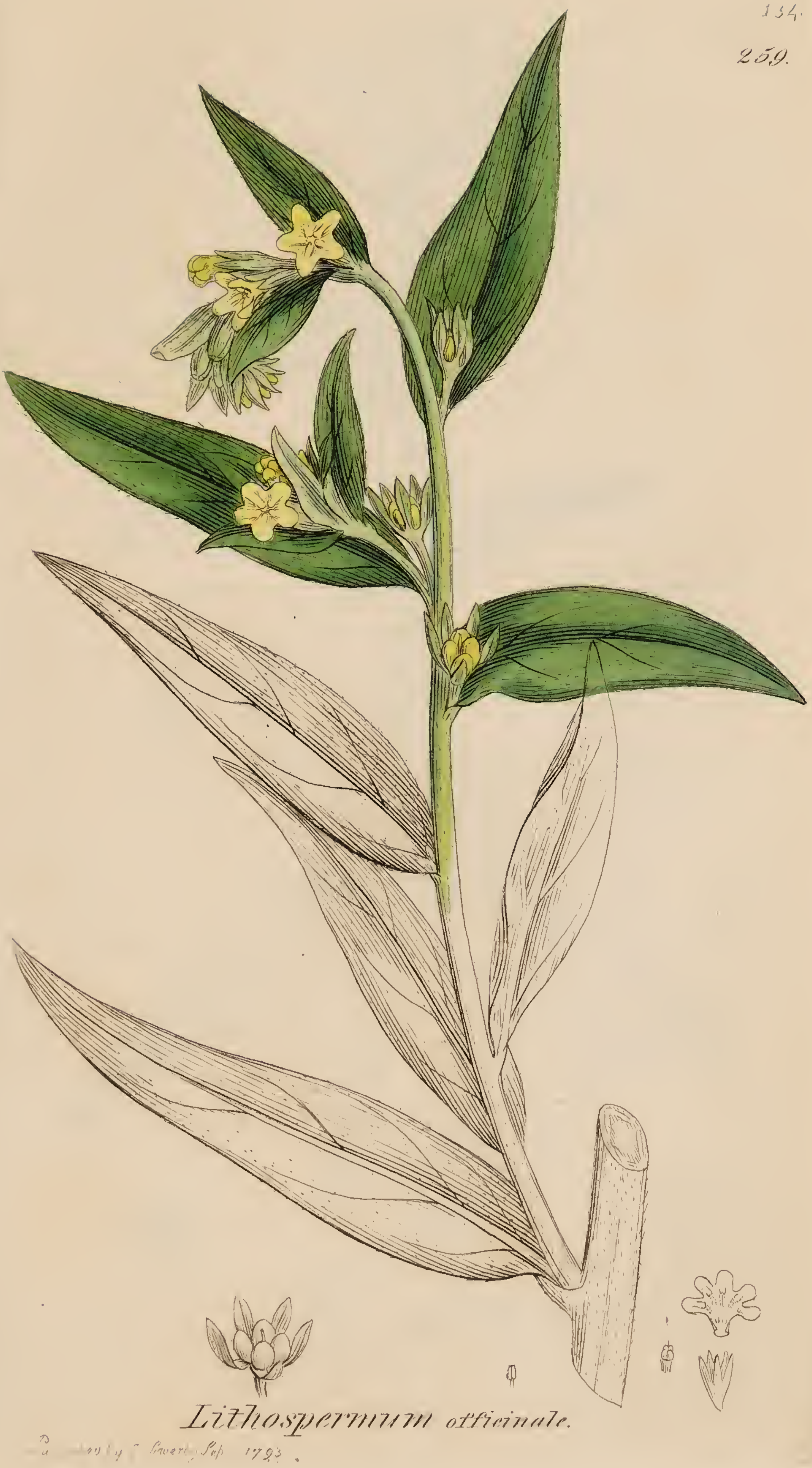
Sep. 1.1813 published by Jas. Sowerby London.



1. *Myosotis versicolor.*
2. . . . . *palustris.*

134.

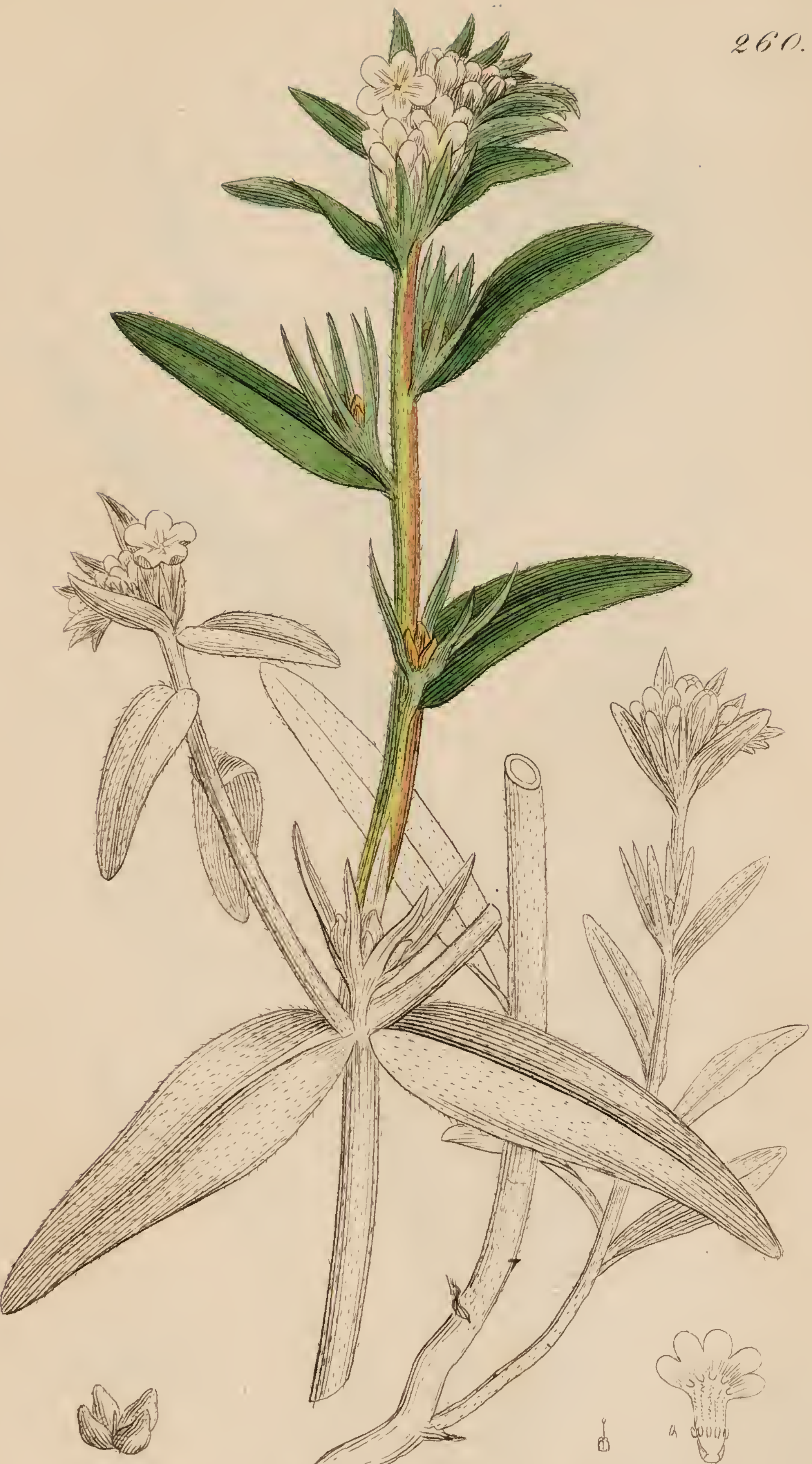
259.



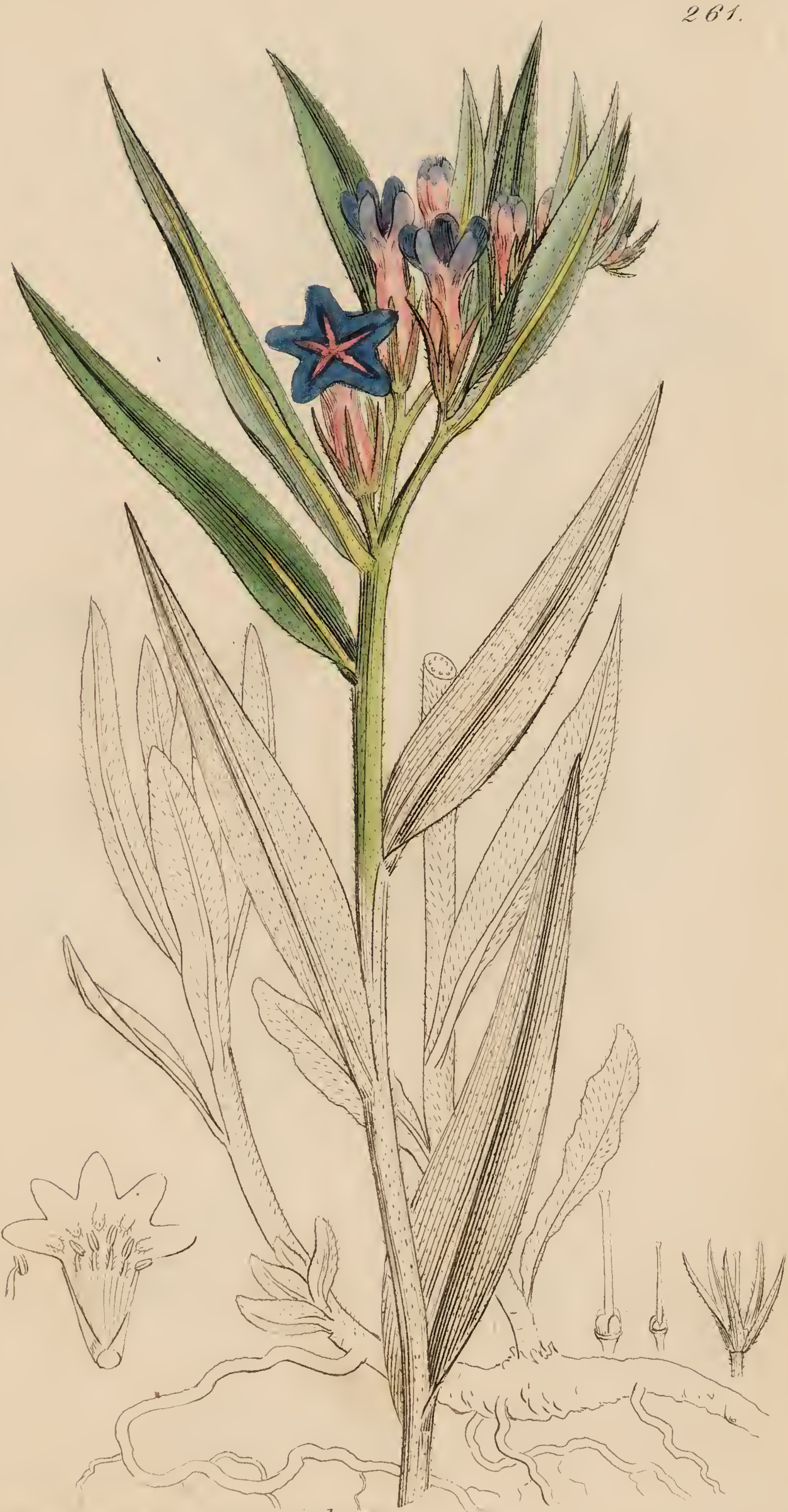
Lithospermum officinale.

Pu[illegible] by J. Sowerby Sep 1793.

260.



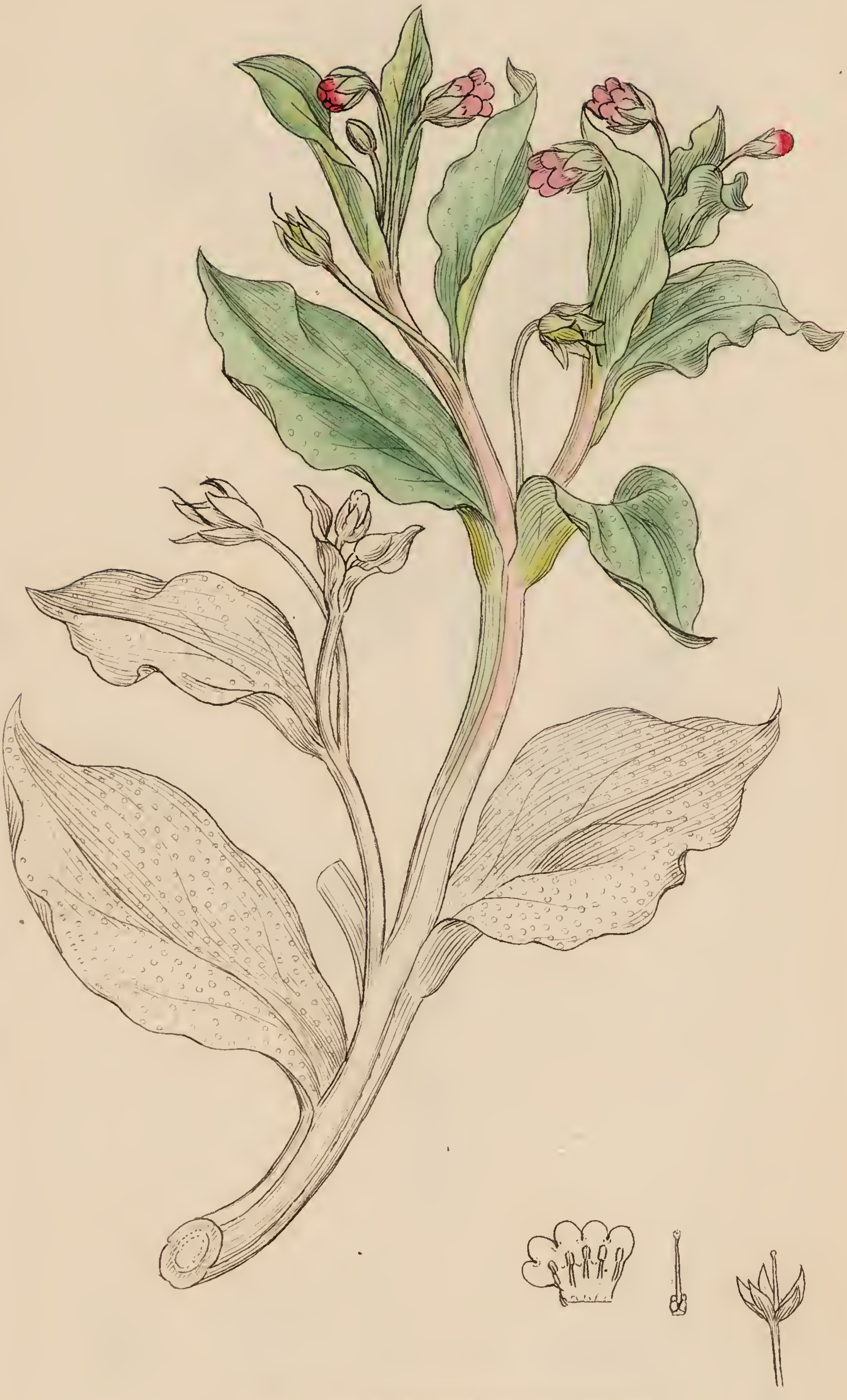
Lithospermum arvense.



Lithospermum purpuro-cæruleum.

368.

262.

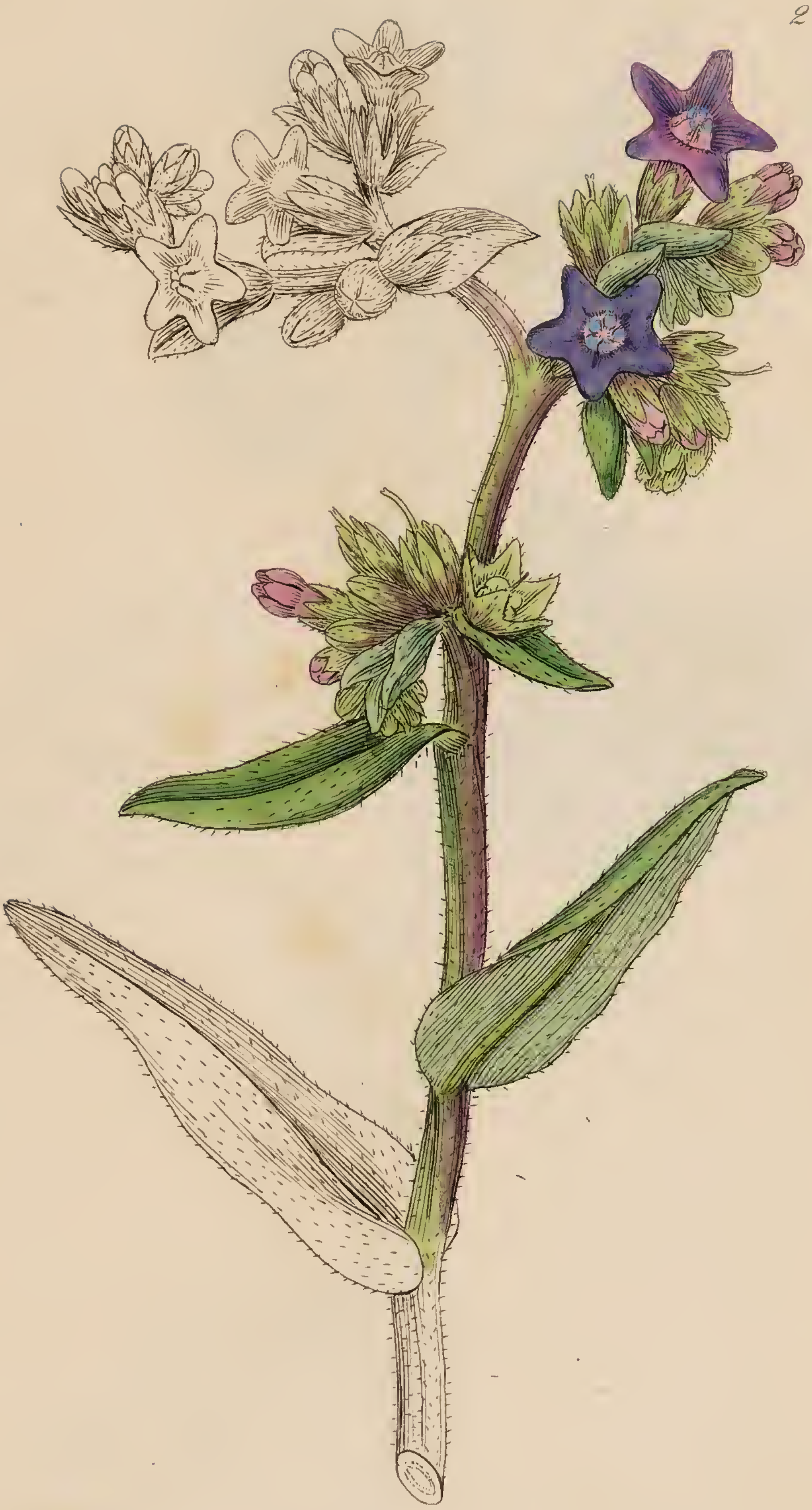


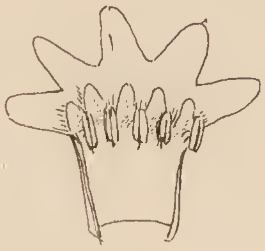
Lithospermum maritimum.

1797 Published by J.s Sowerby London

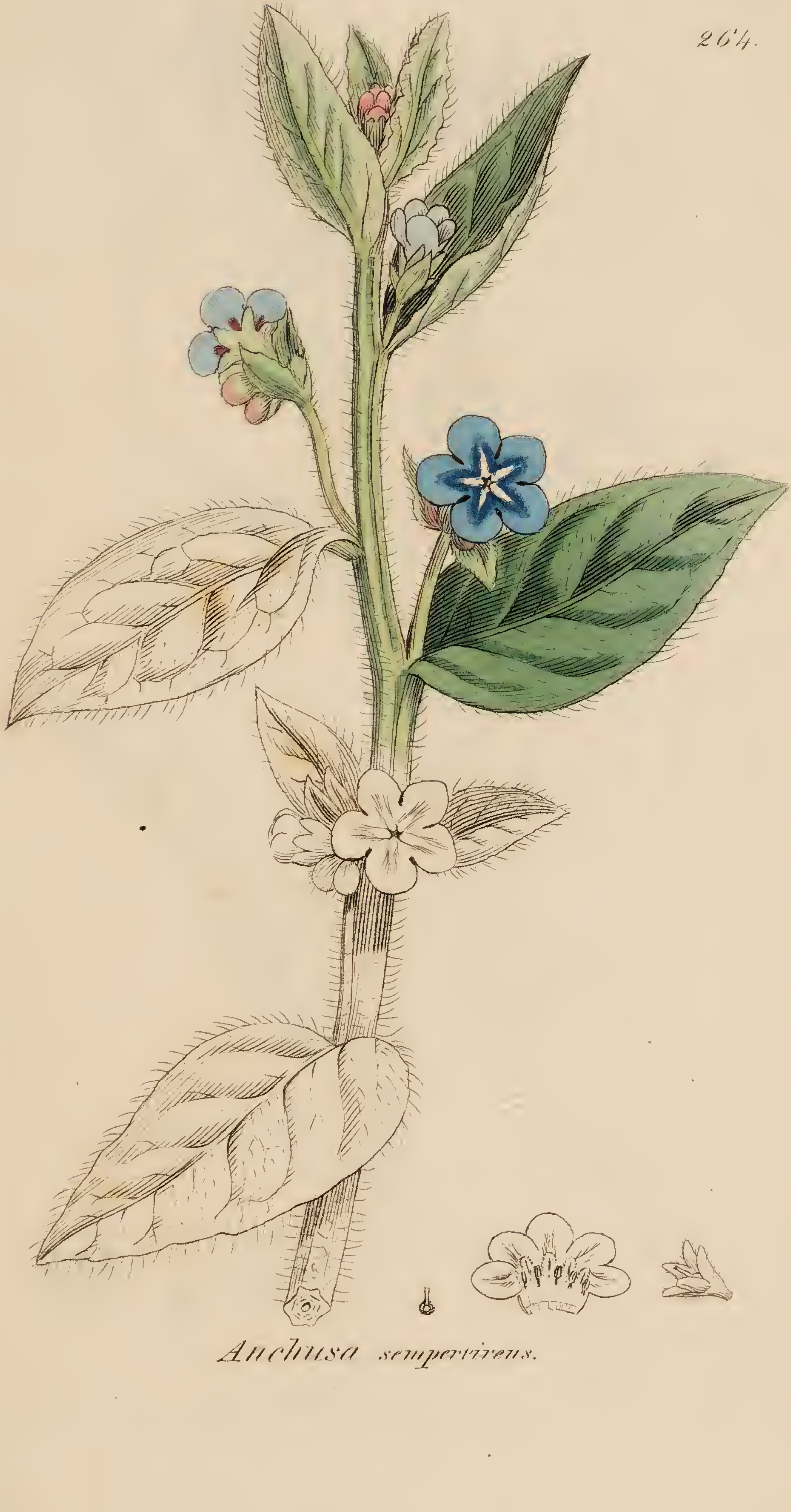
N°

263.





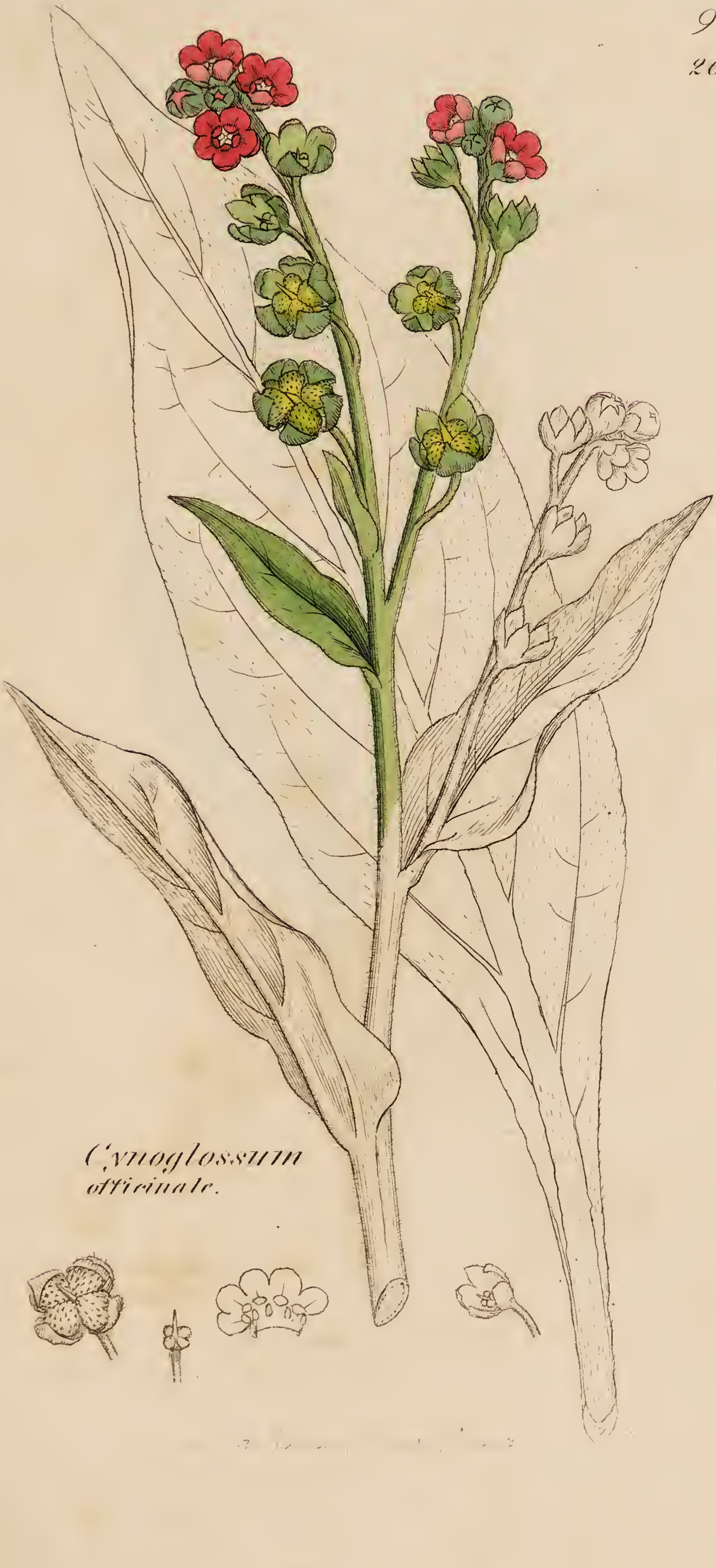
Anchusa officinalis.



Anchusa sempervirens.

921.

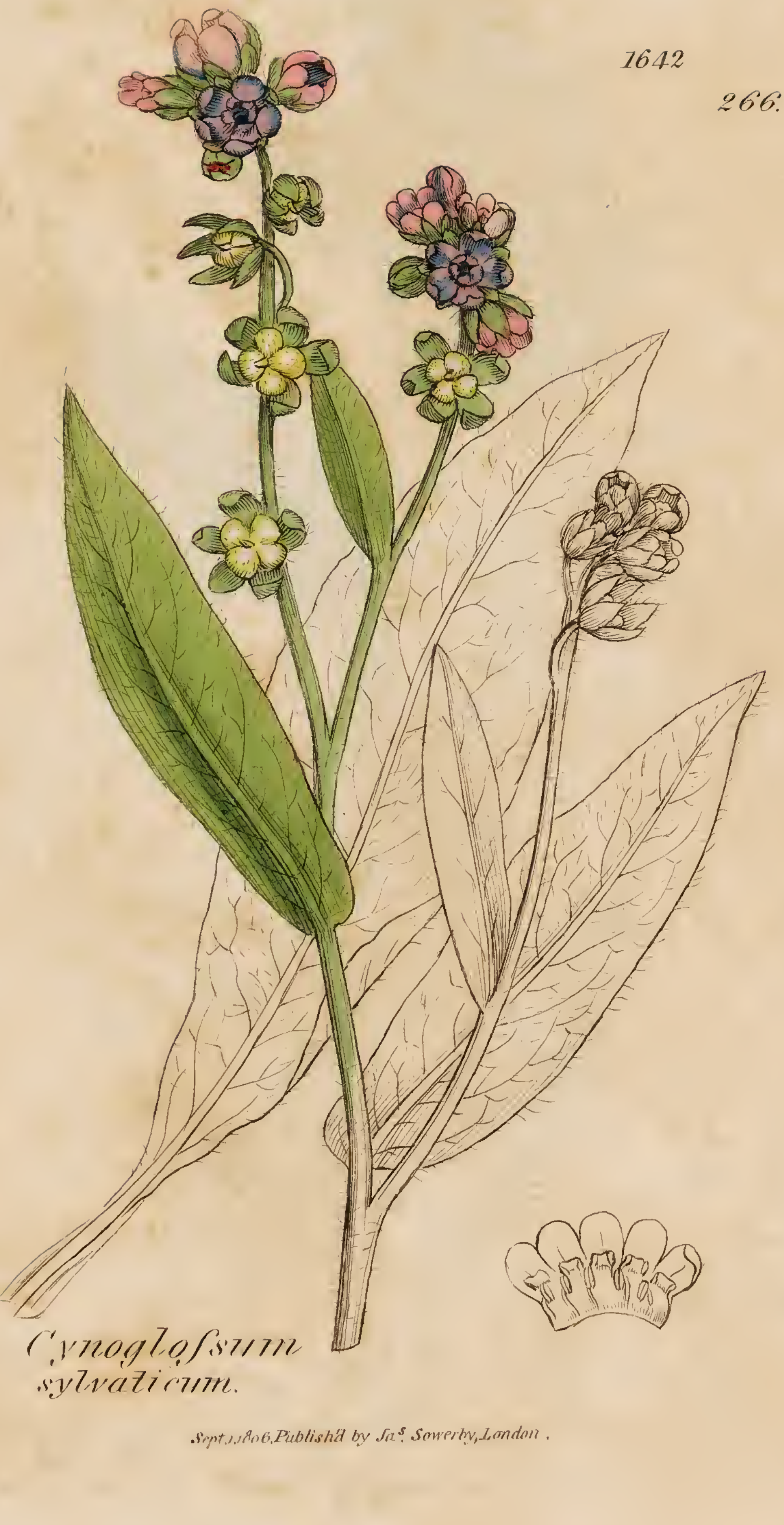
265.



Cynoglossum officinale.

1642

266.

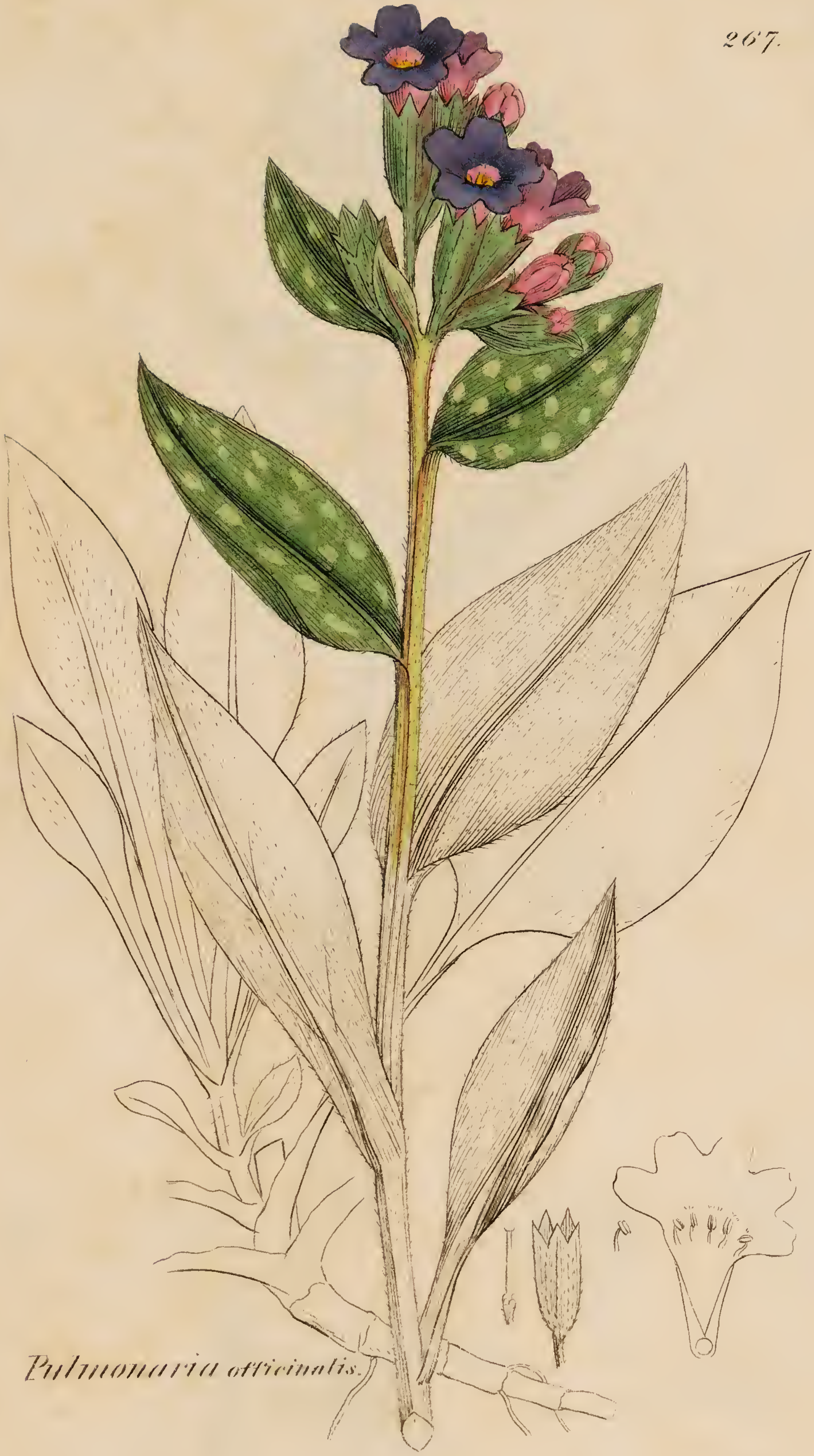


Cynogloſsum sylvaticum.

Sept.1.1806. Publish'd by Jas. Sowerby, London.

118.

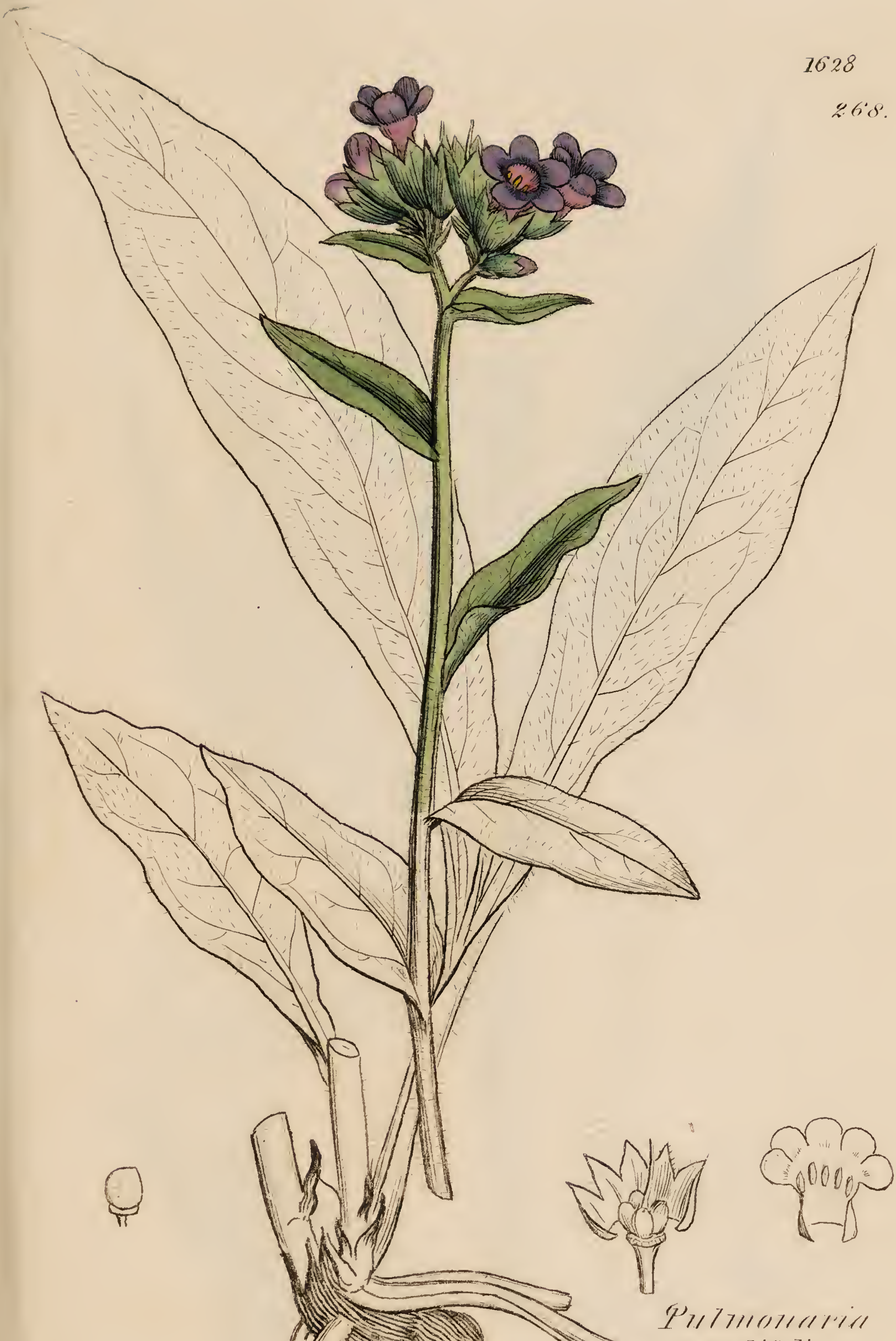
267.



Pulmonaria officinalis.

1628

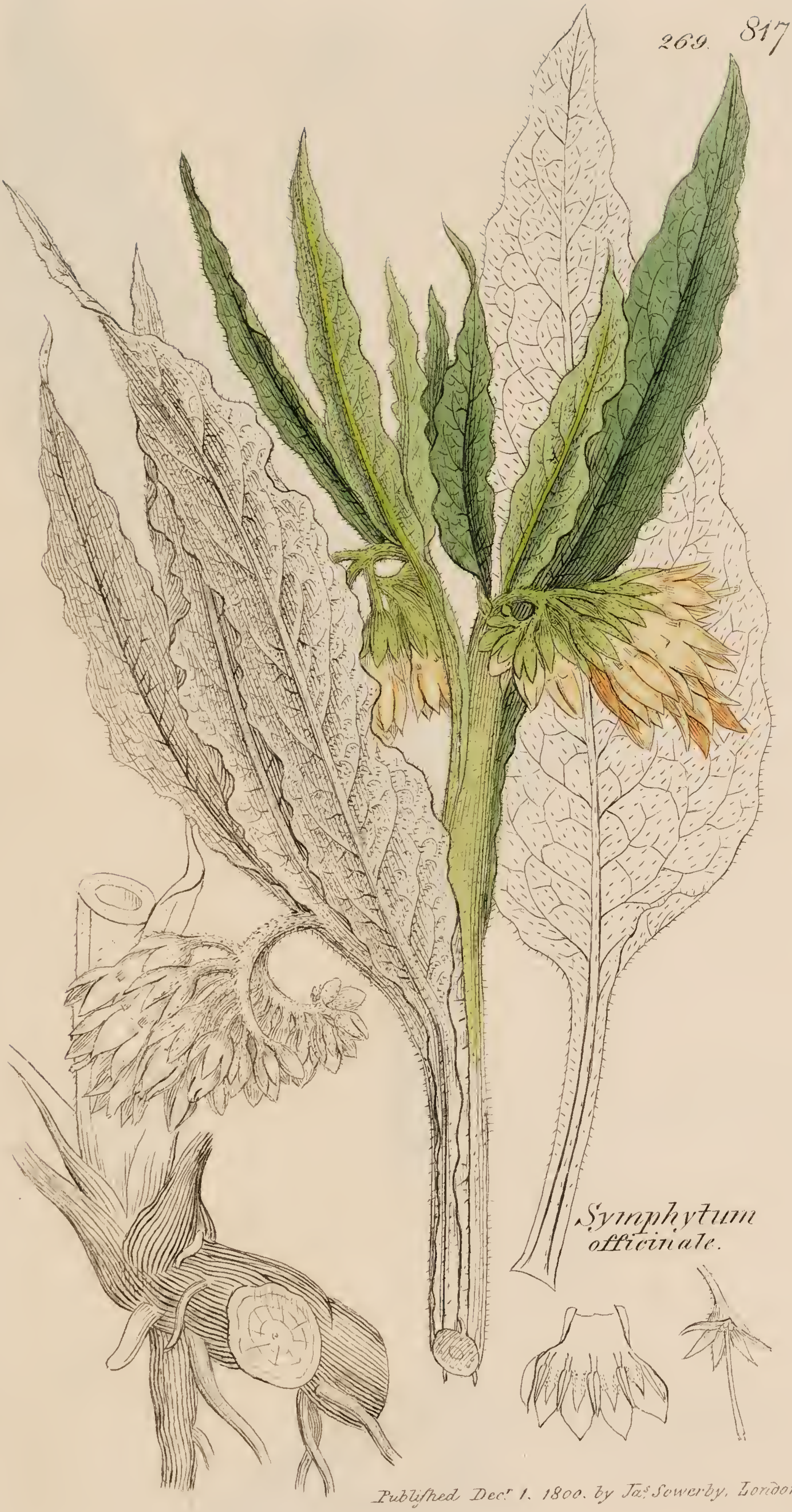
268.



Pulmonaria
angustifolia.

Aug. 1. 1806. Publish'd by Jas Sowerby Londo

269. 817

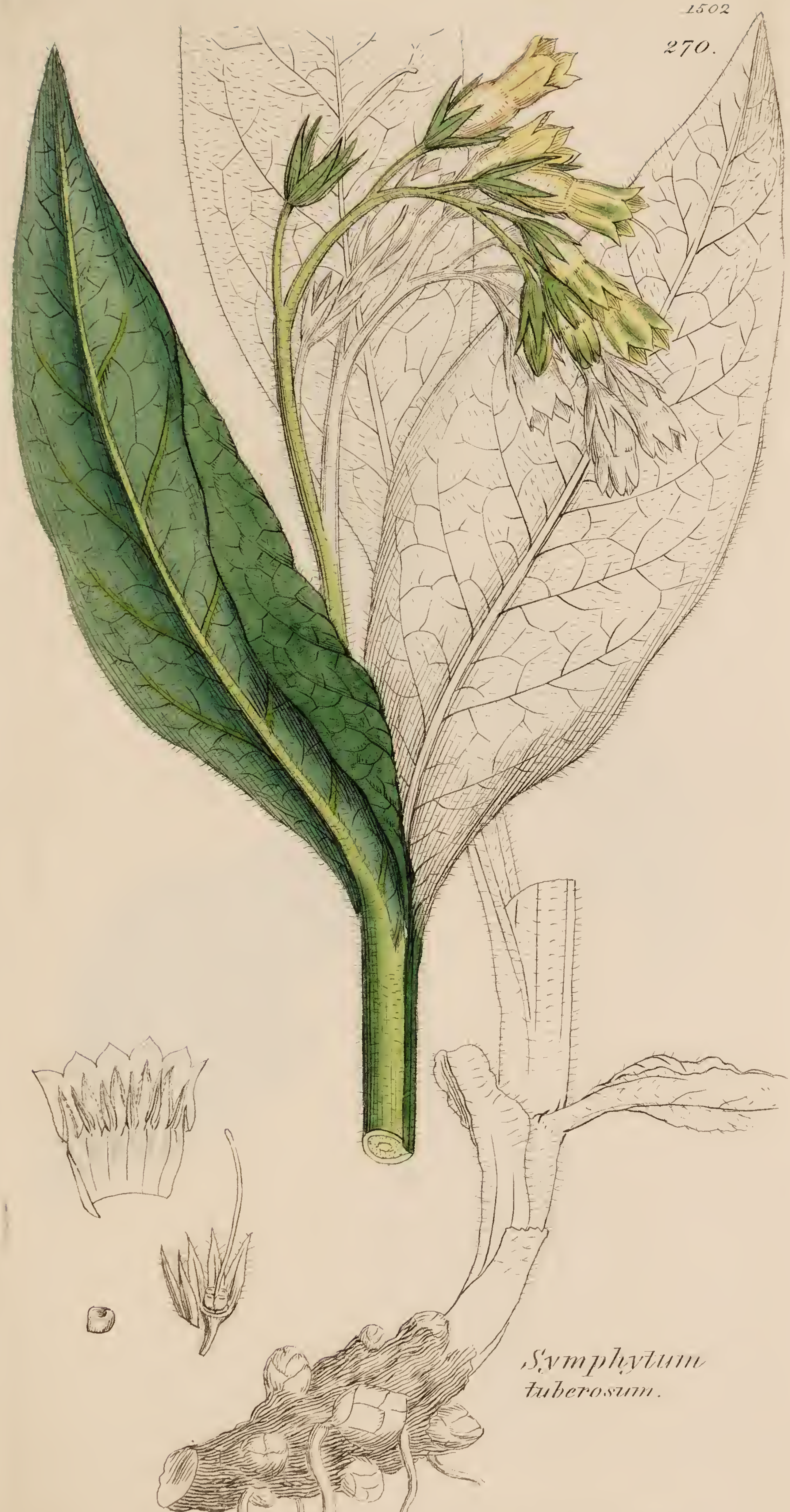


Symphytum officinale.

Published Decr. 1. 1800. by Jas. Sowerby, London

1502

270.

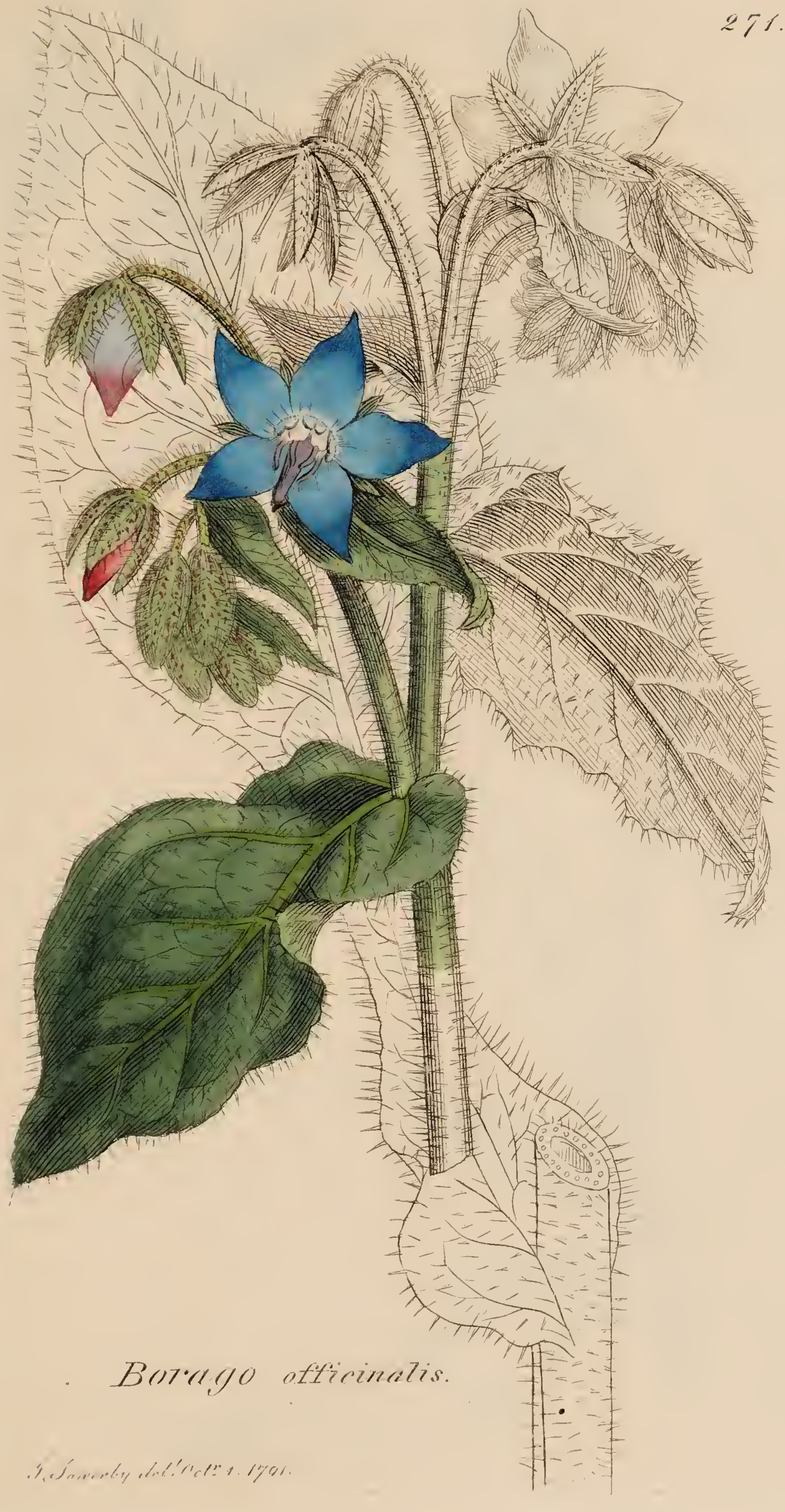


Symphytum tuberosum.

[illegible]

36

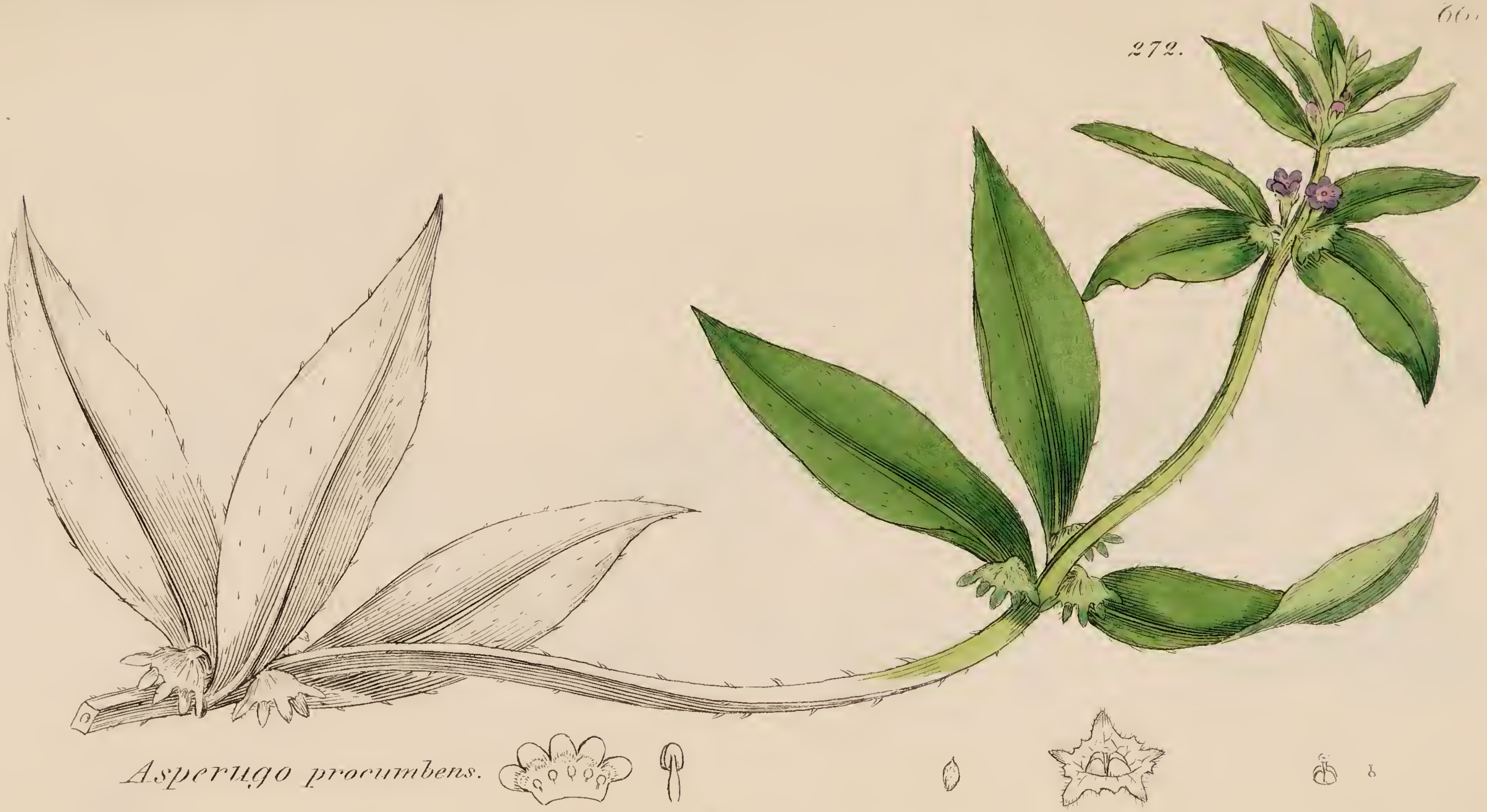
271.



Borago officinalis.

J. Sowerby delt. Octr. 1. 1791.

272.

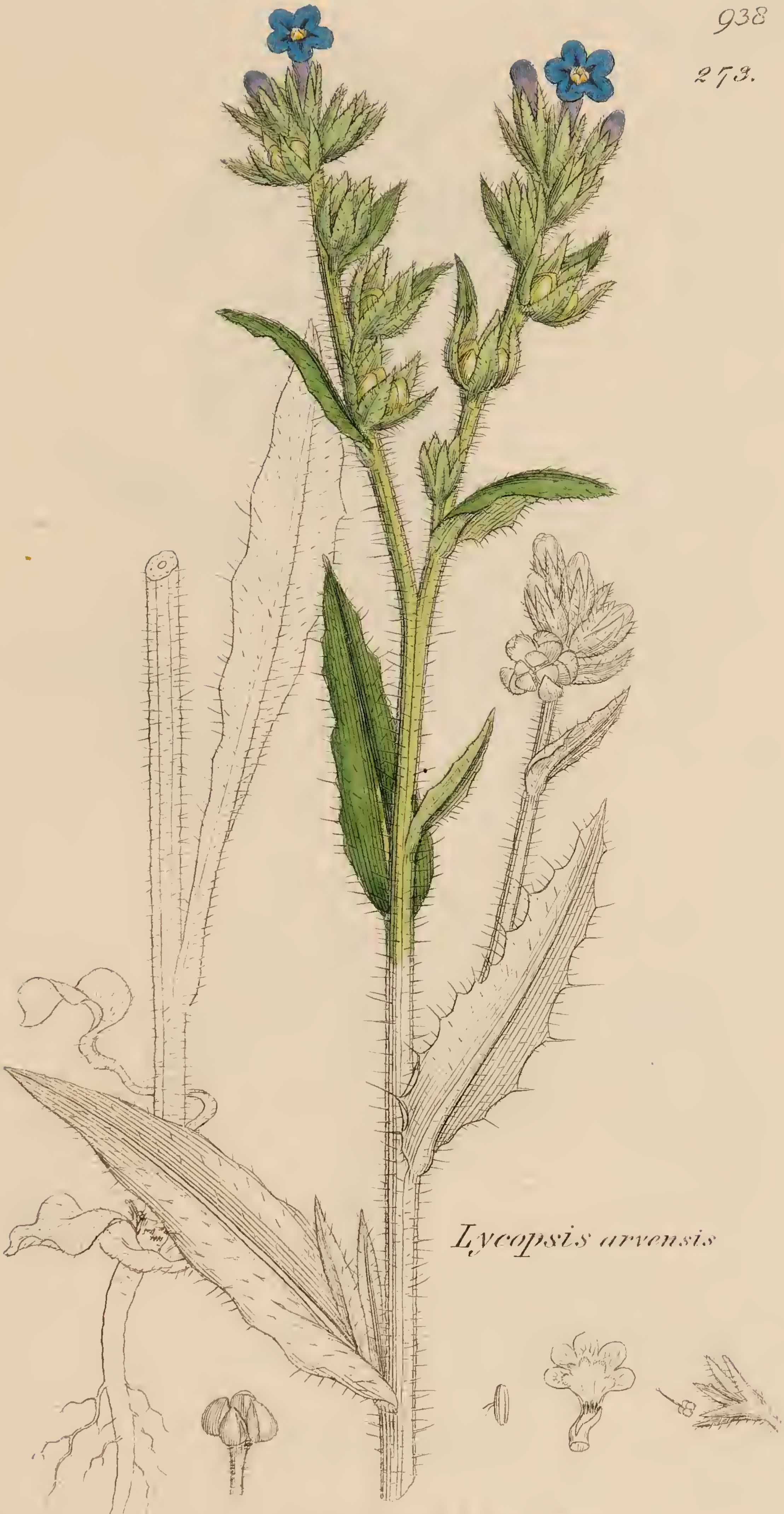


Asperugo procumbens.

Oct. 1. 1799 Publish'd by J. Sowerby Lond.

938

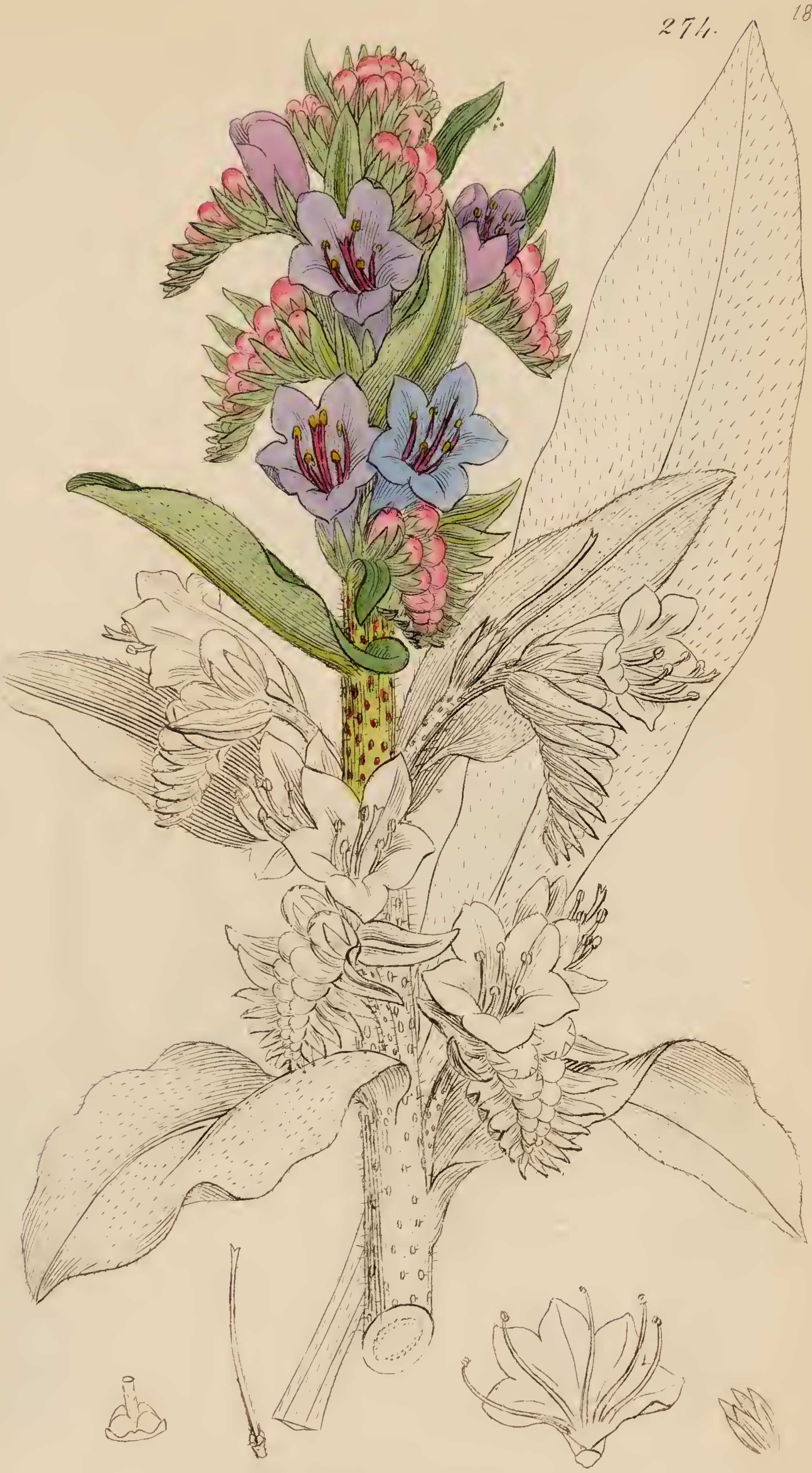
273.



Lycopsis arvensis

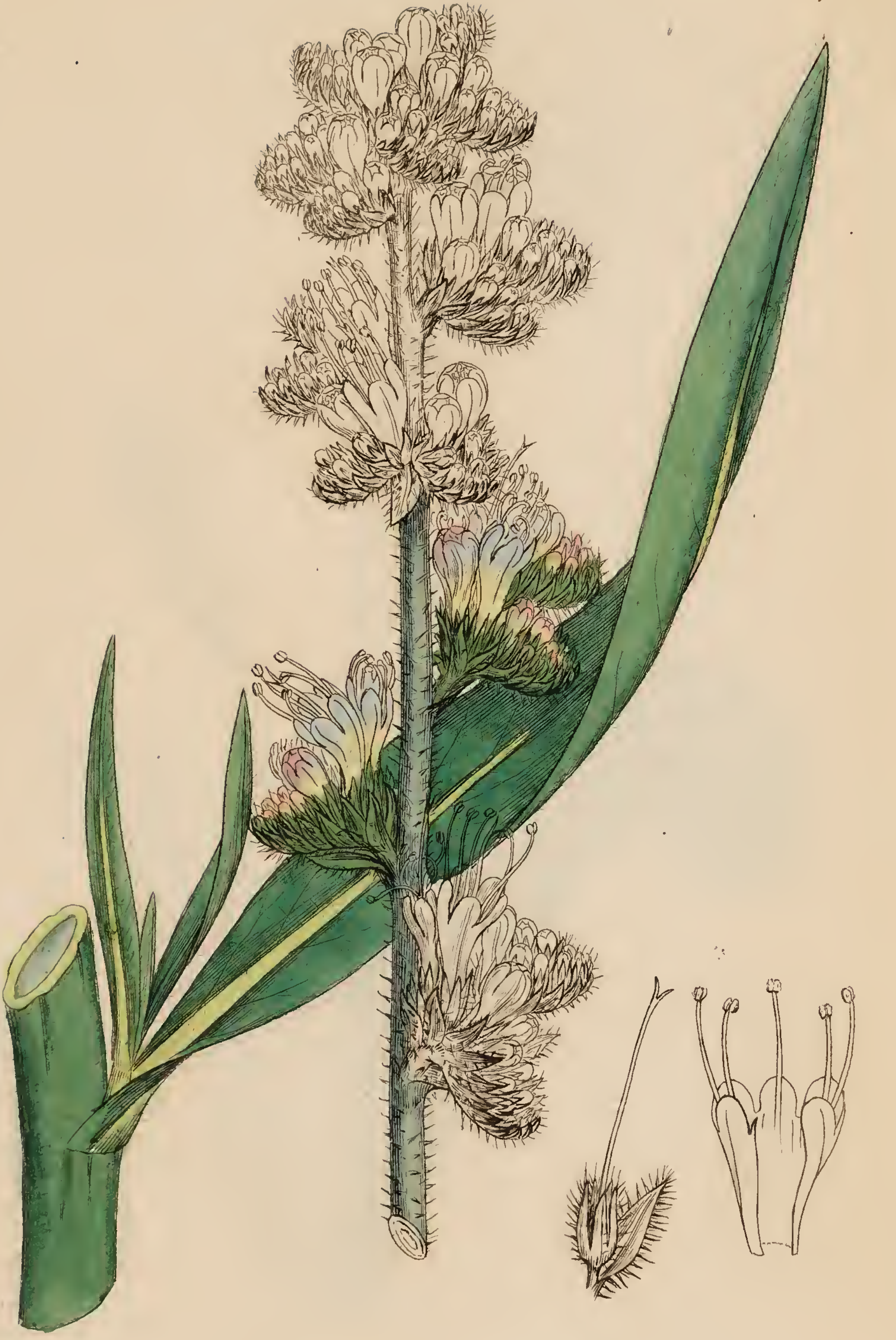
[illegible]

274. 181



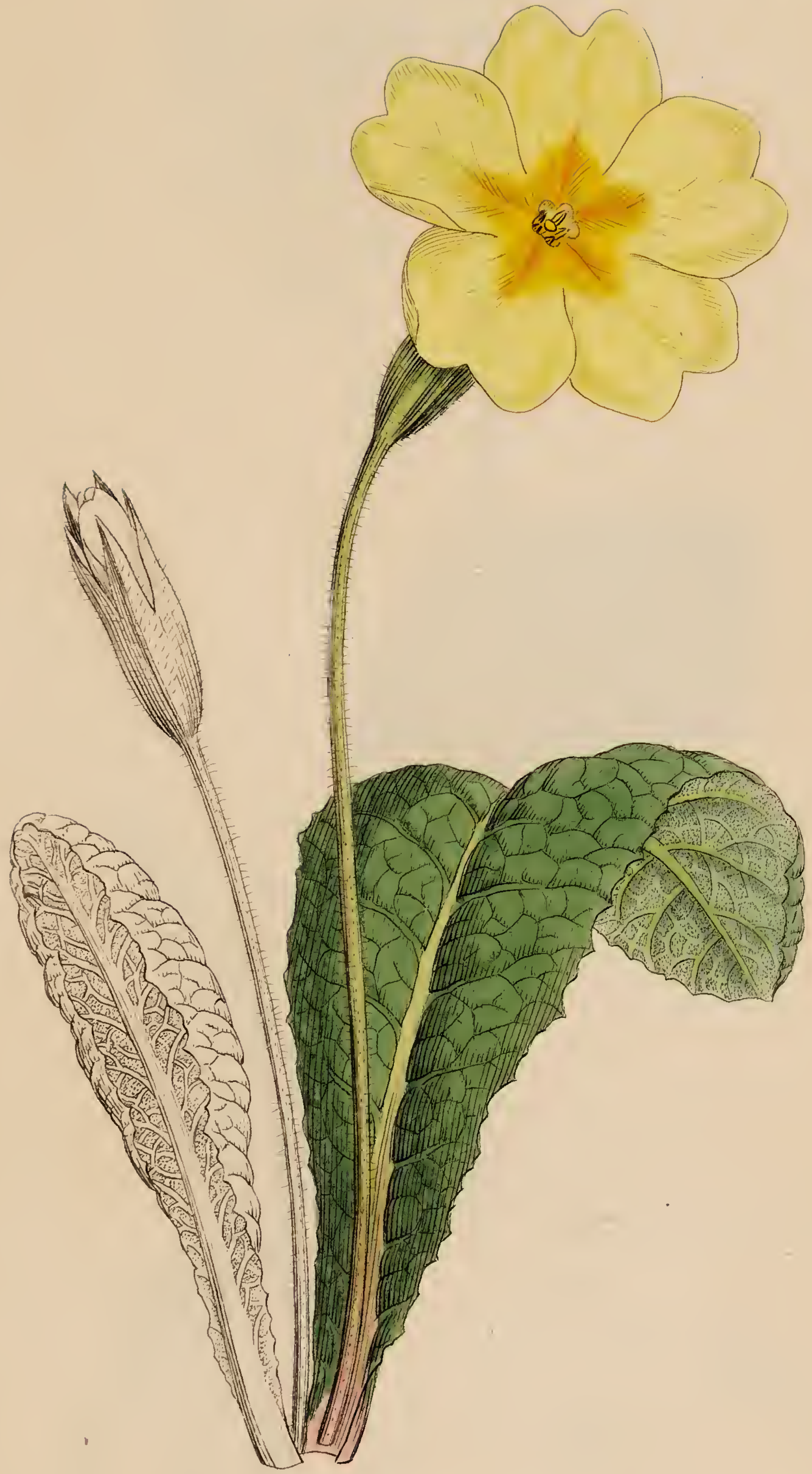
Echium vulgare.

2081.
274*



[illegible] published by J. Sowerby London.

275.

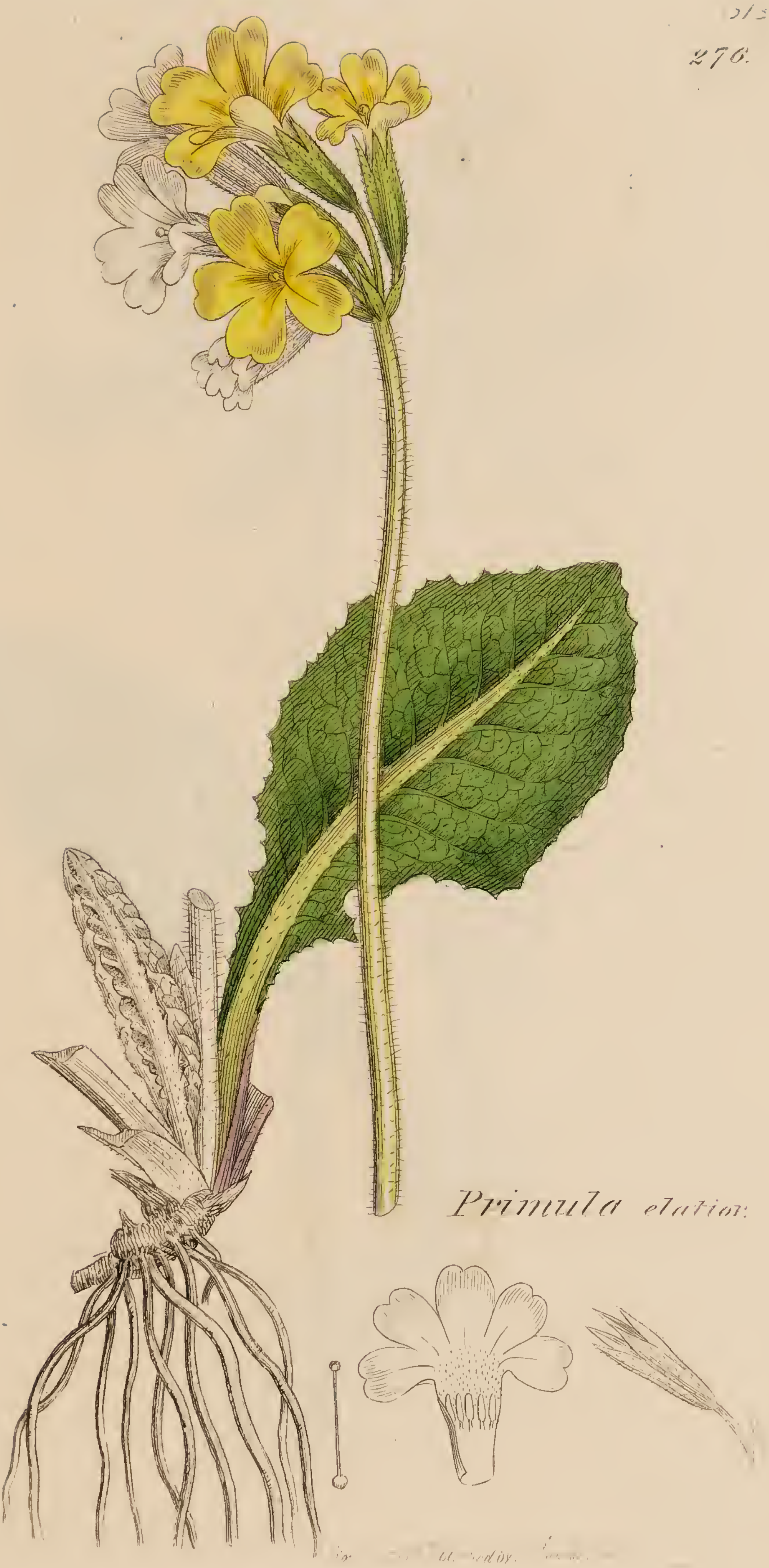


Primula vulgaris.

J. Sowerby. delᵗ. Janʸ. 1. 1794.

513

276.

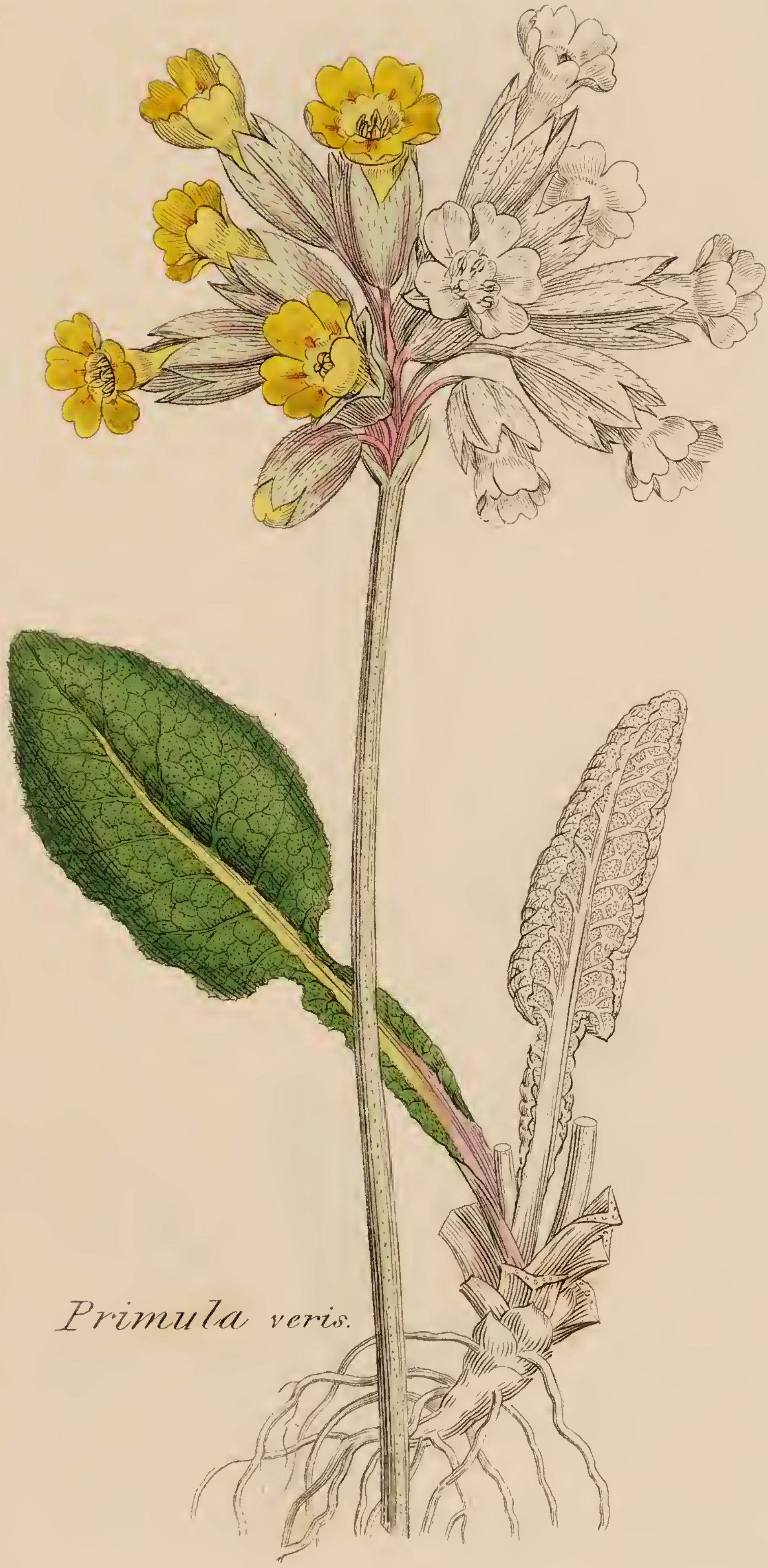


Primula elatior.

[illegible] Published by [illegible]

5

277.

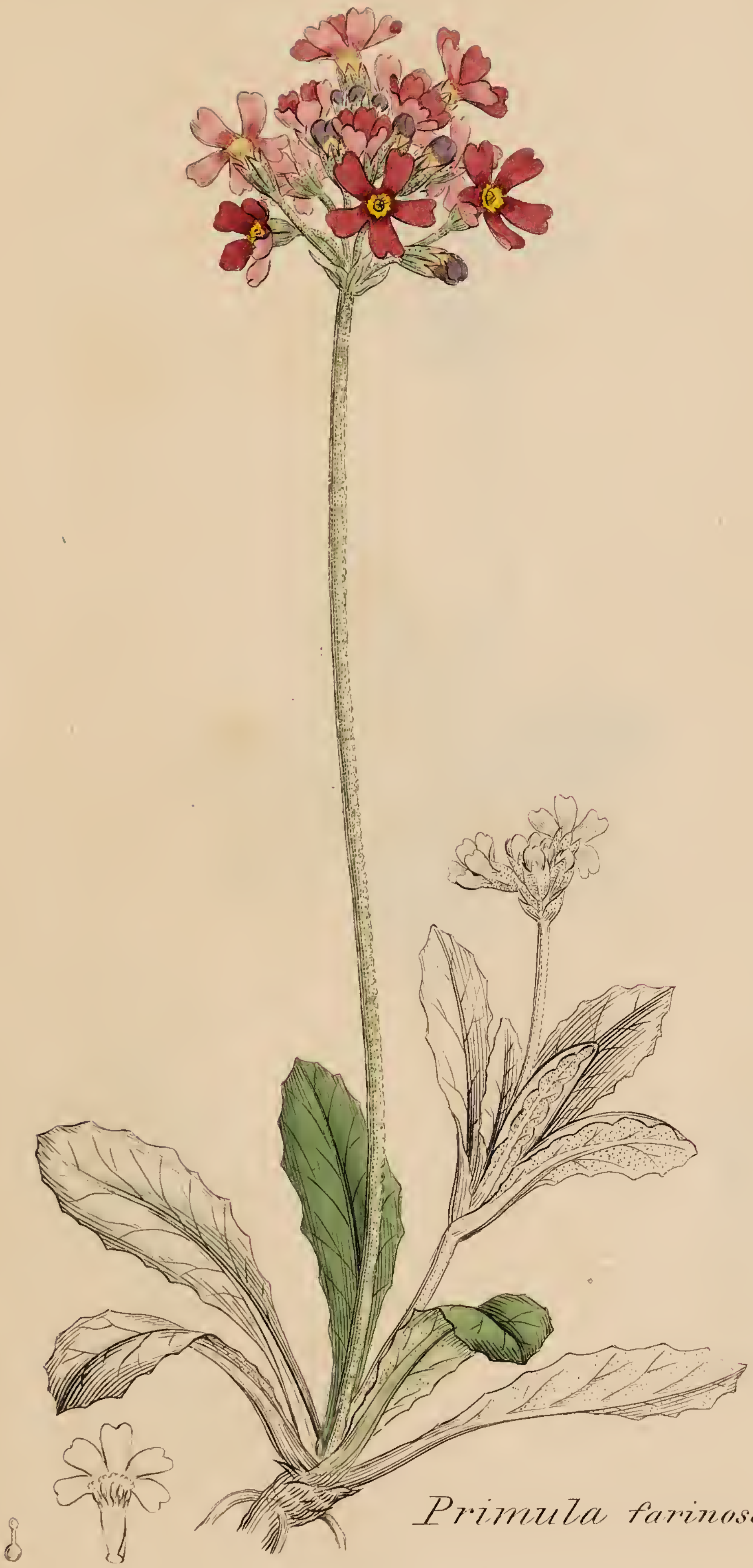


Primula veris.

[illegible] 1794

6

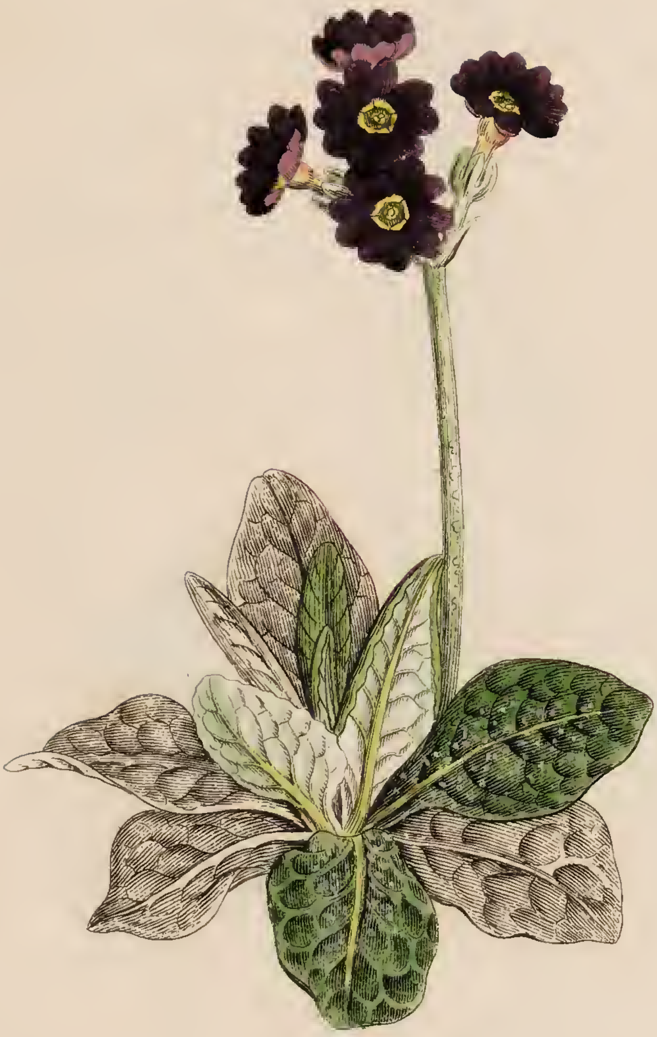
278.

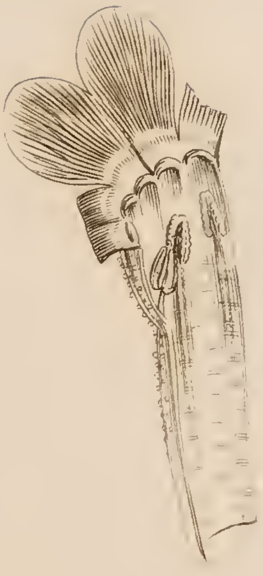


Primula farinosa.

J. Sowerby delt. Janry 1. 1791.

2608.

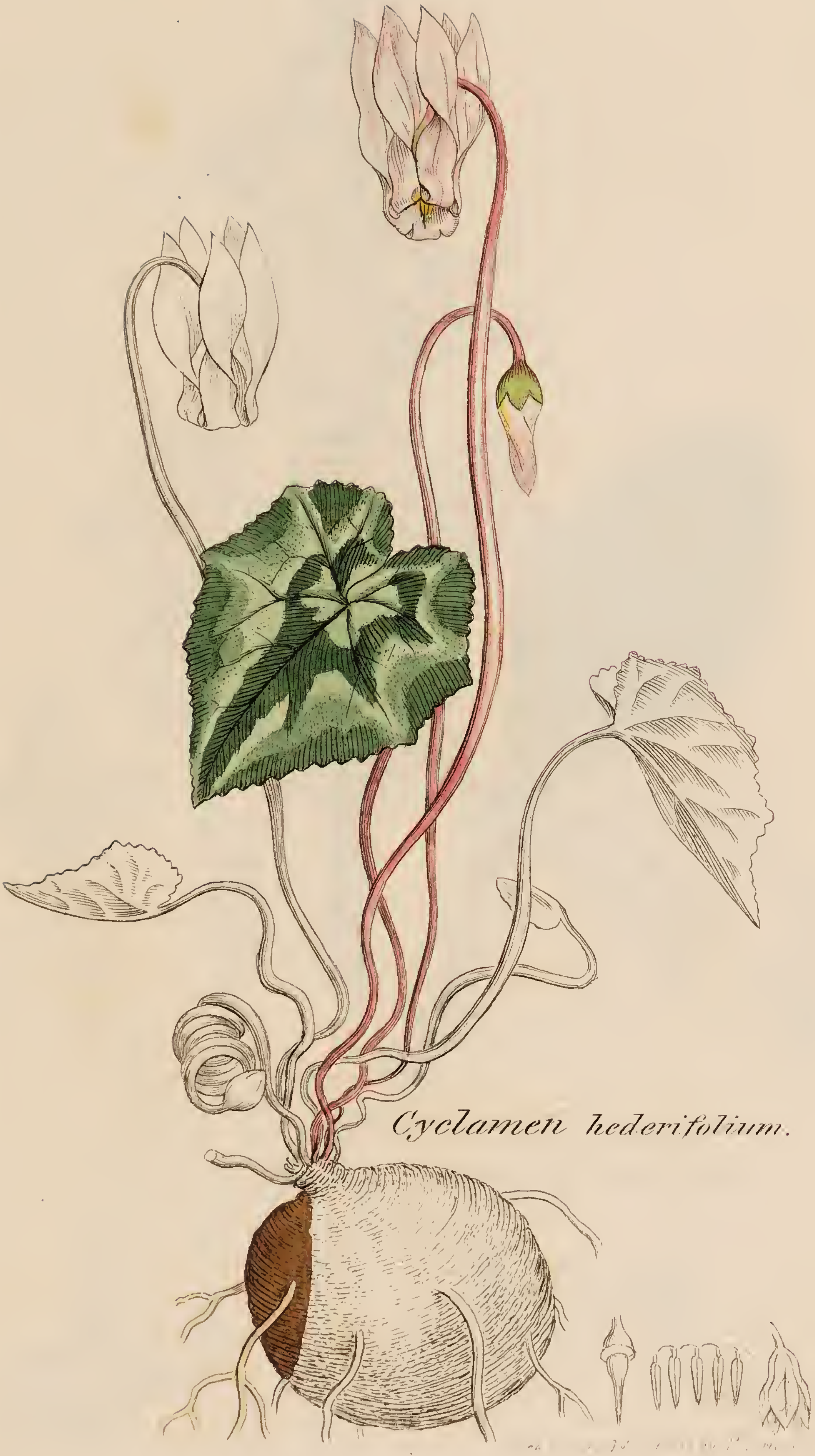




November 1st 1829.

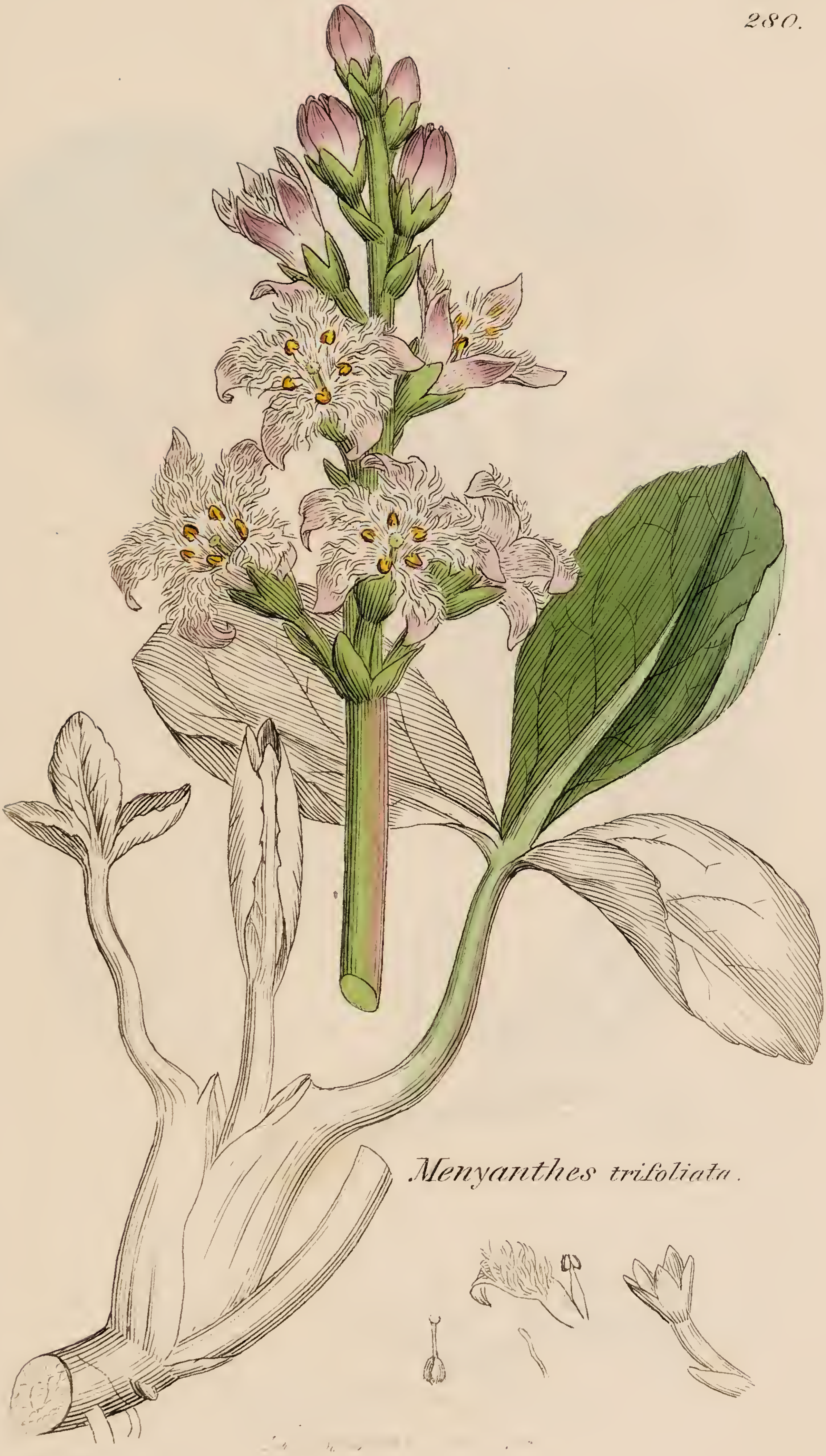
548.

279.



Cyclamen hederifolium.

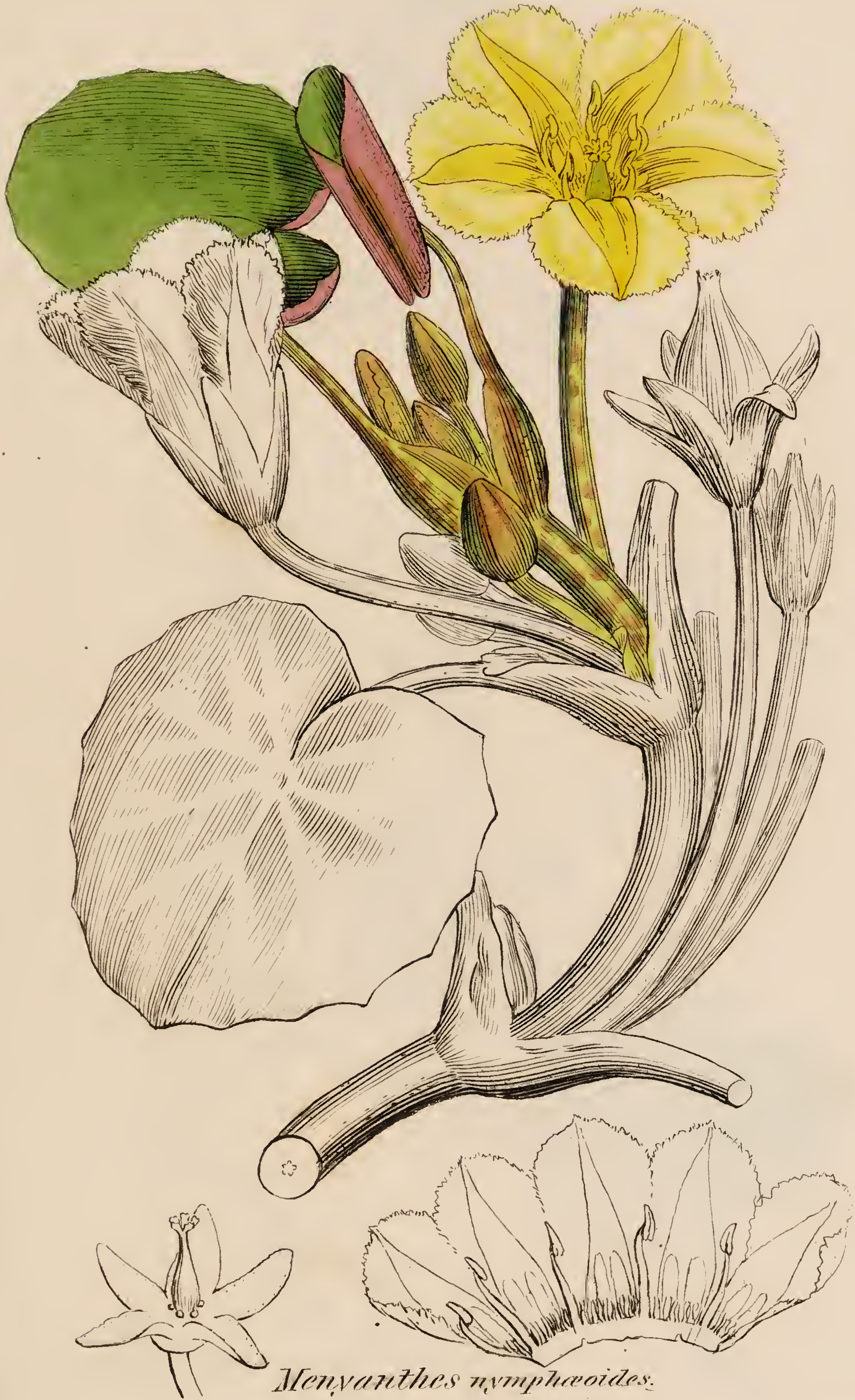
495.
280.



Menyanthes trifoliata.

217.

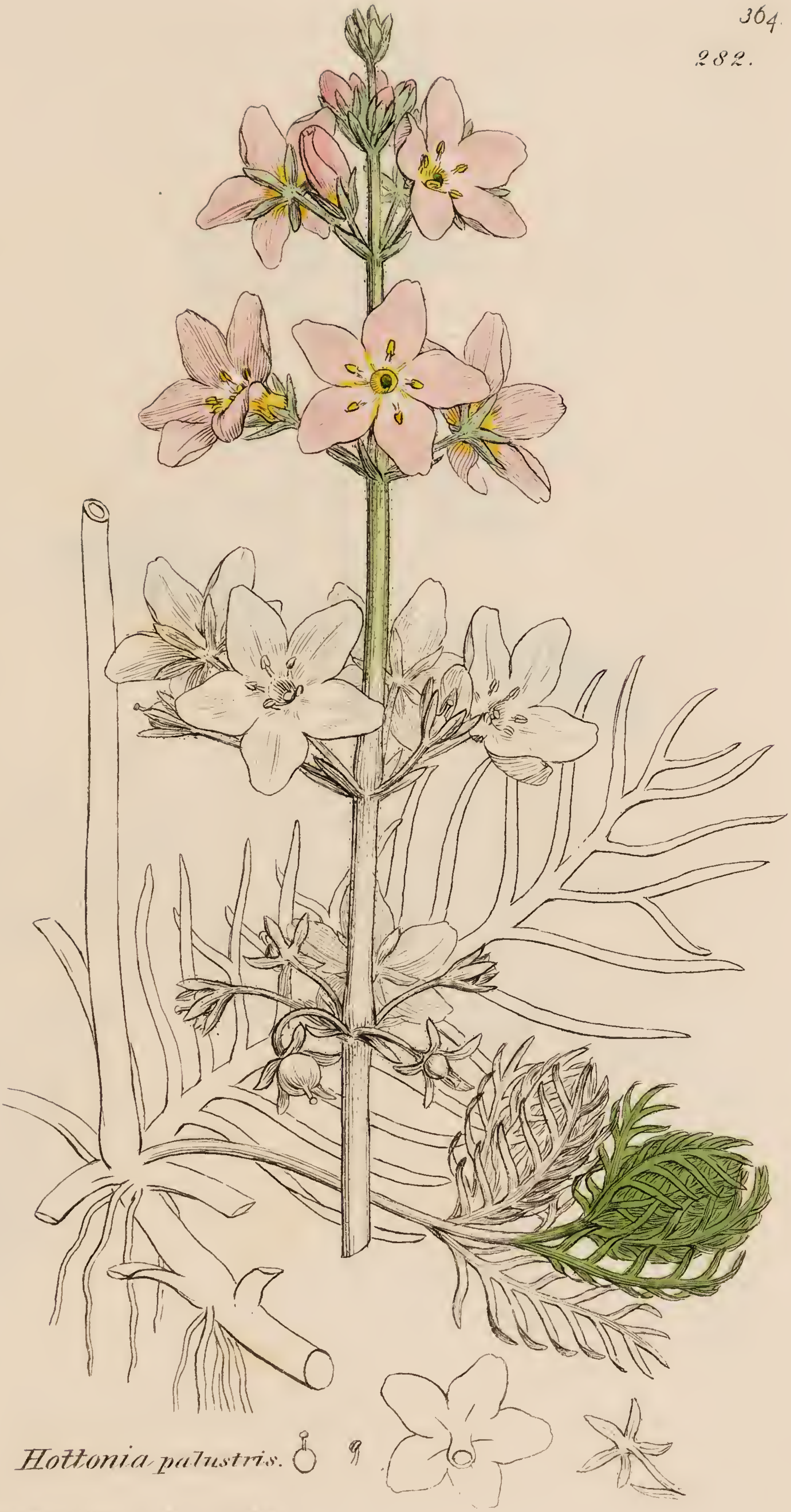
281.



Menyanthes nymphæoides.

364.

282.

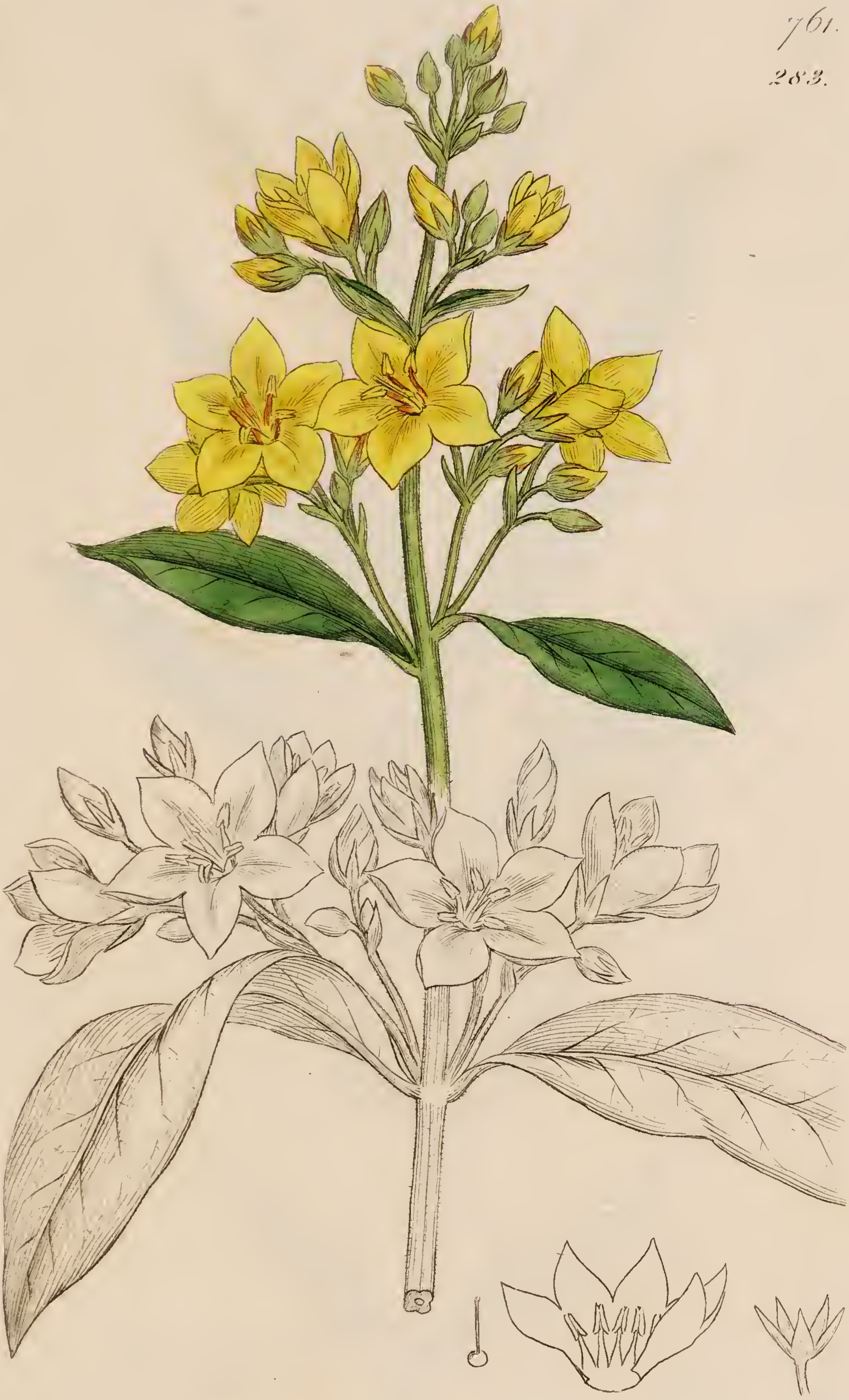


Hottonia palustris.

[illegible] Sowerby London

761.

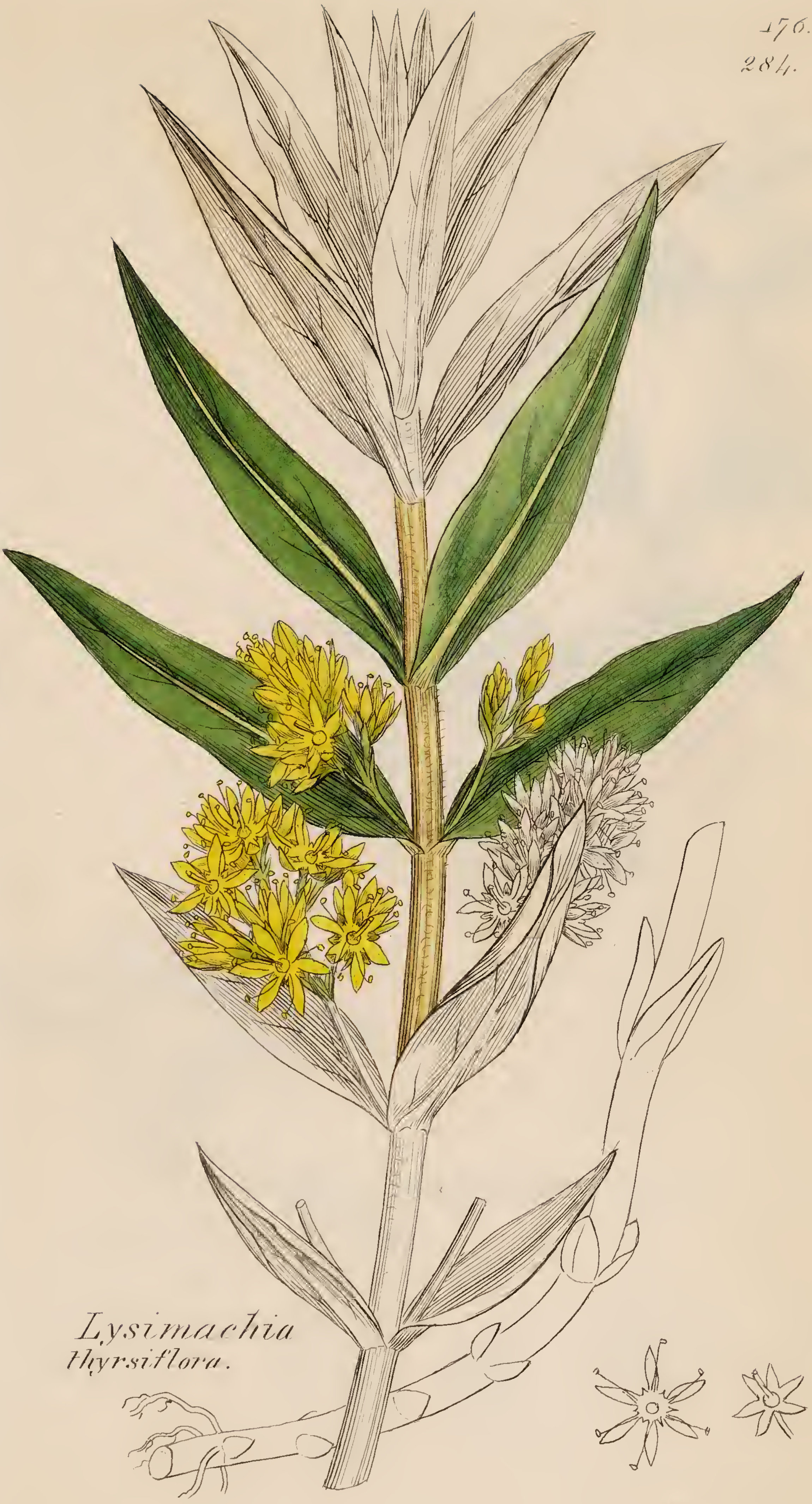
283.



Lysimachia vulgaris.

[illegible]

176.
284.

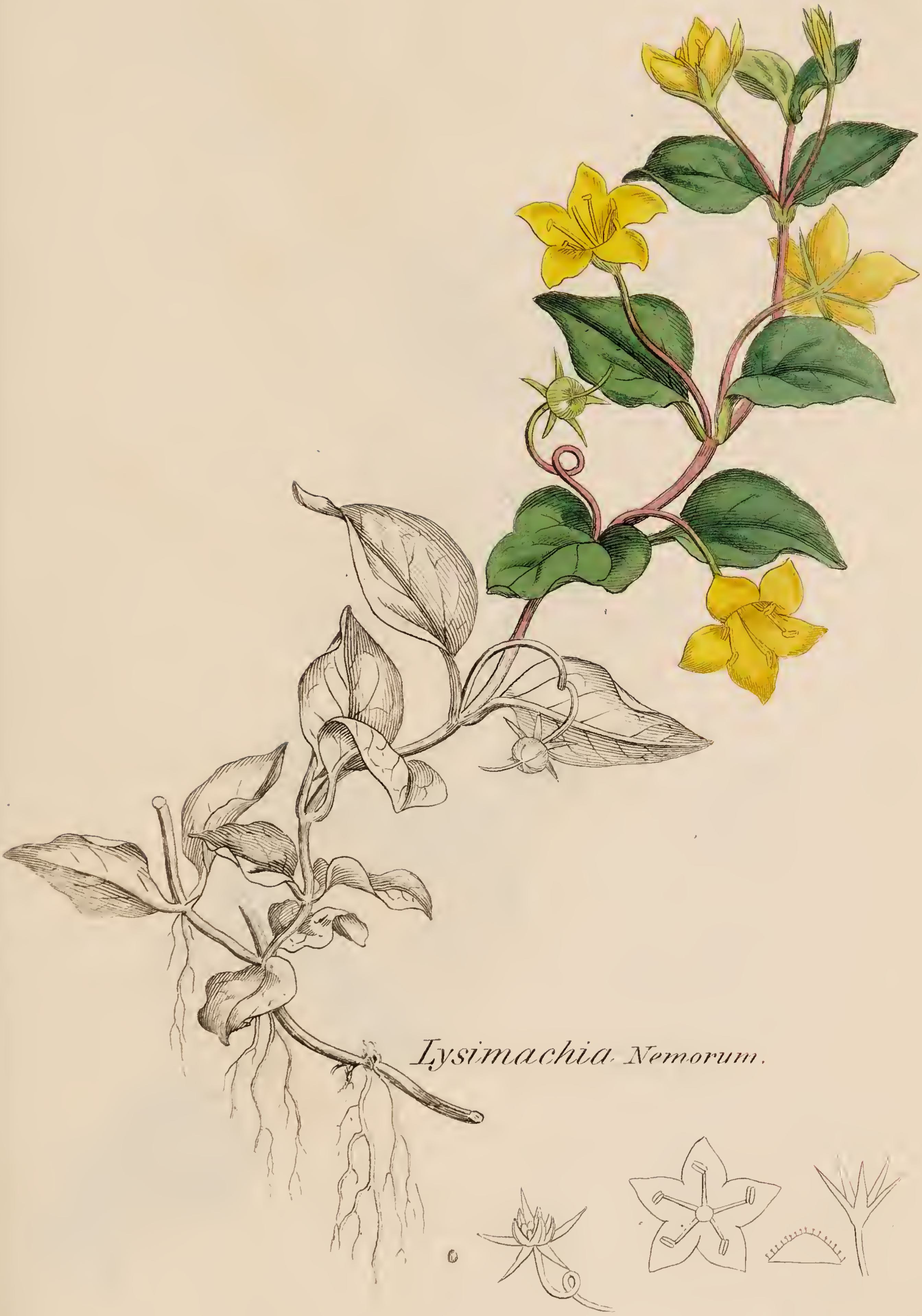


Lysimachia
thyrsiflora.

J. Sowerby [illegible] Aug. 1 1794

527.

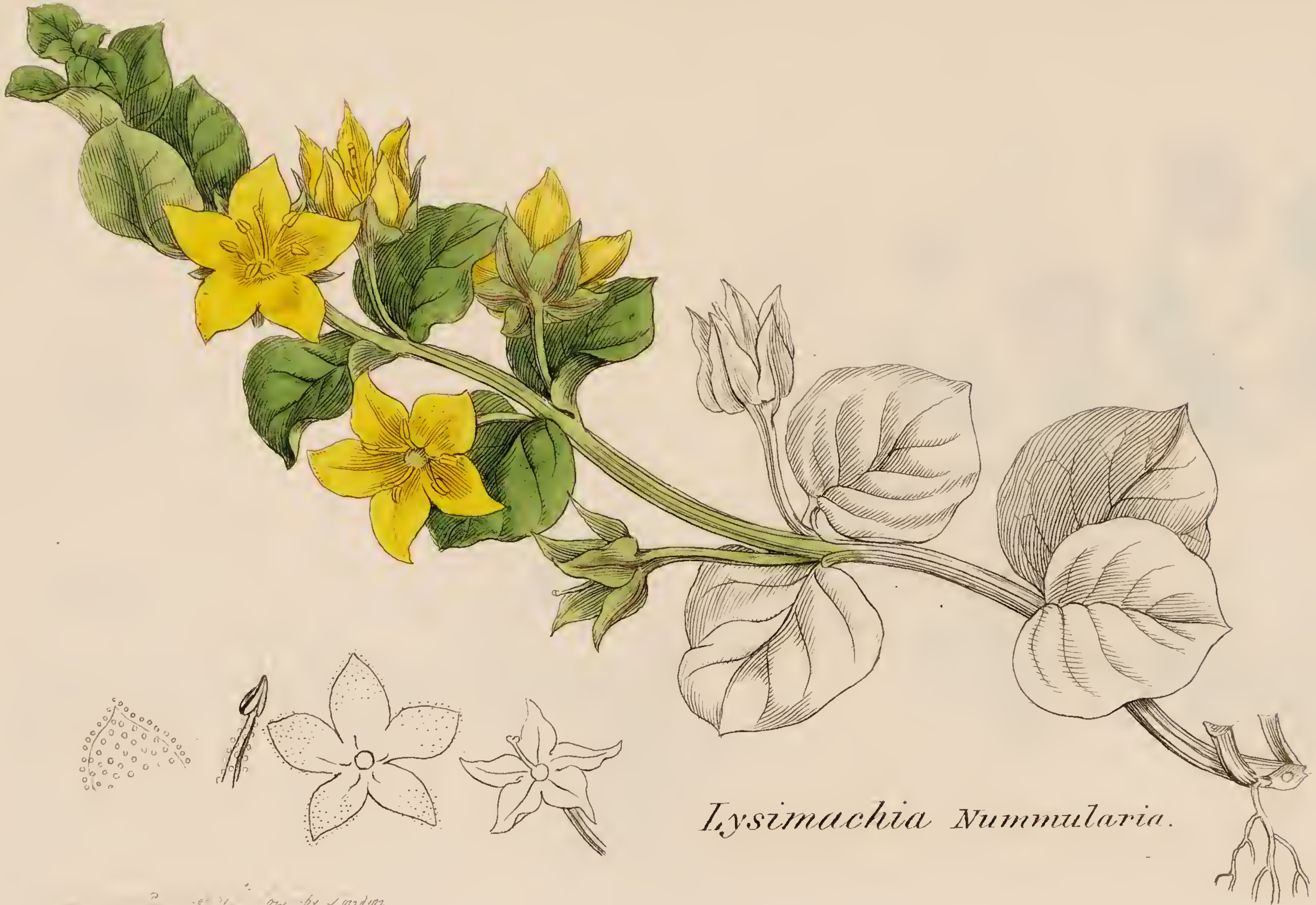
285.



Lysimachia Nemorum.

[illegible]

528.
286.

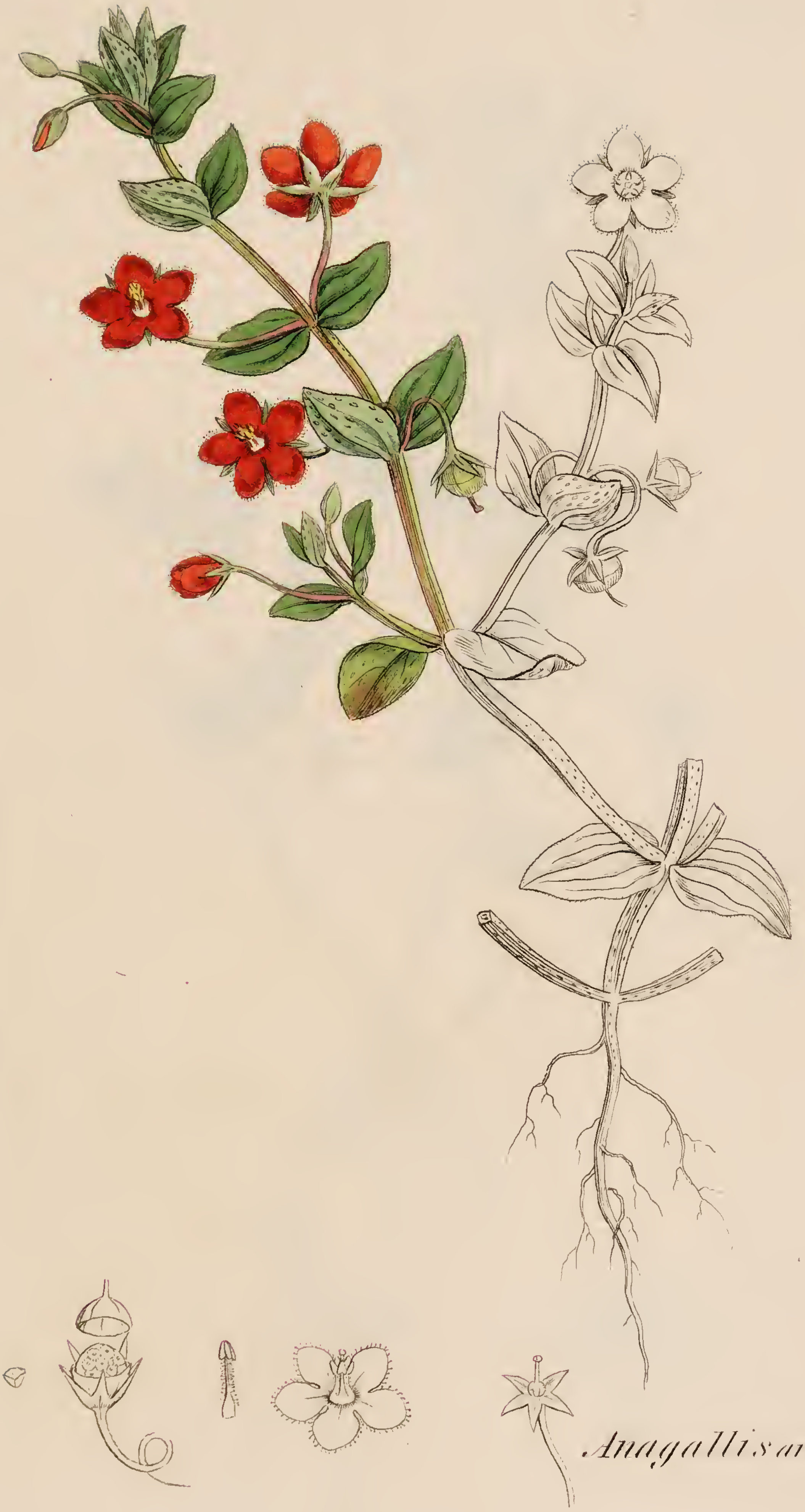


Lysimachia Nummularia.

[illegible] ow by London

529.

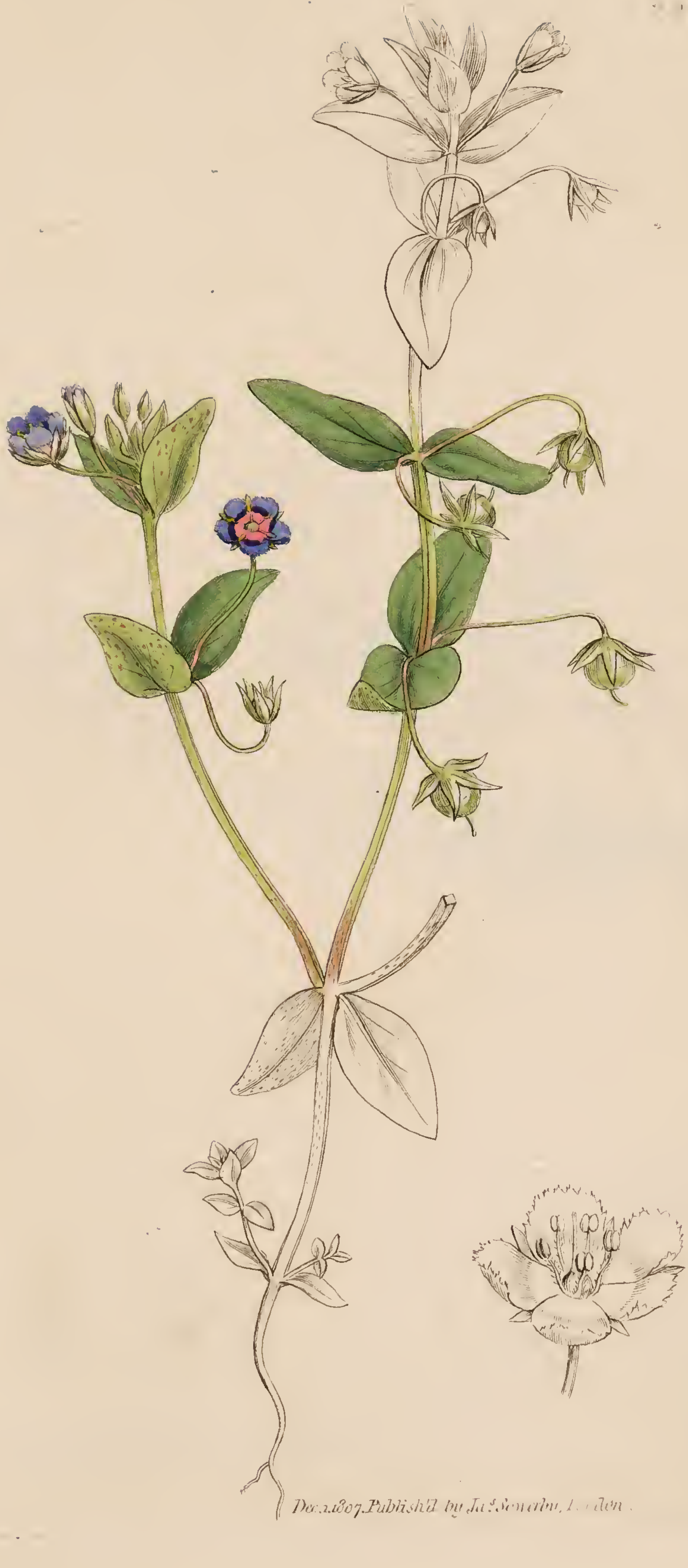
287.



Anagallis arvensis.

[illegible] by Js Sowerby London

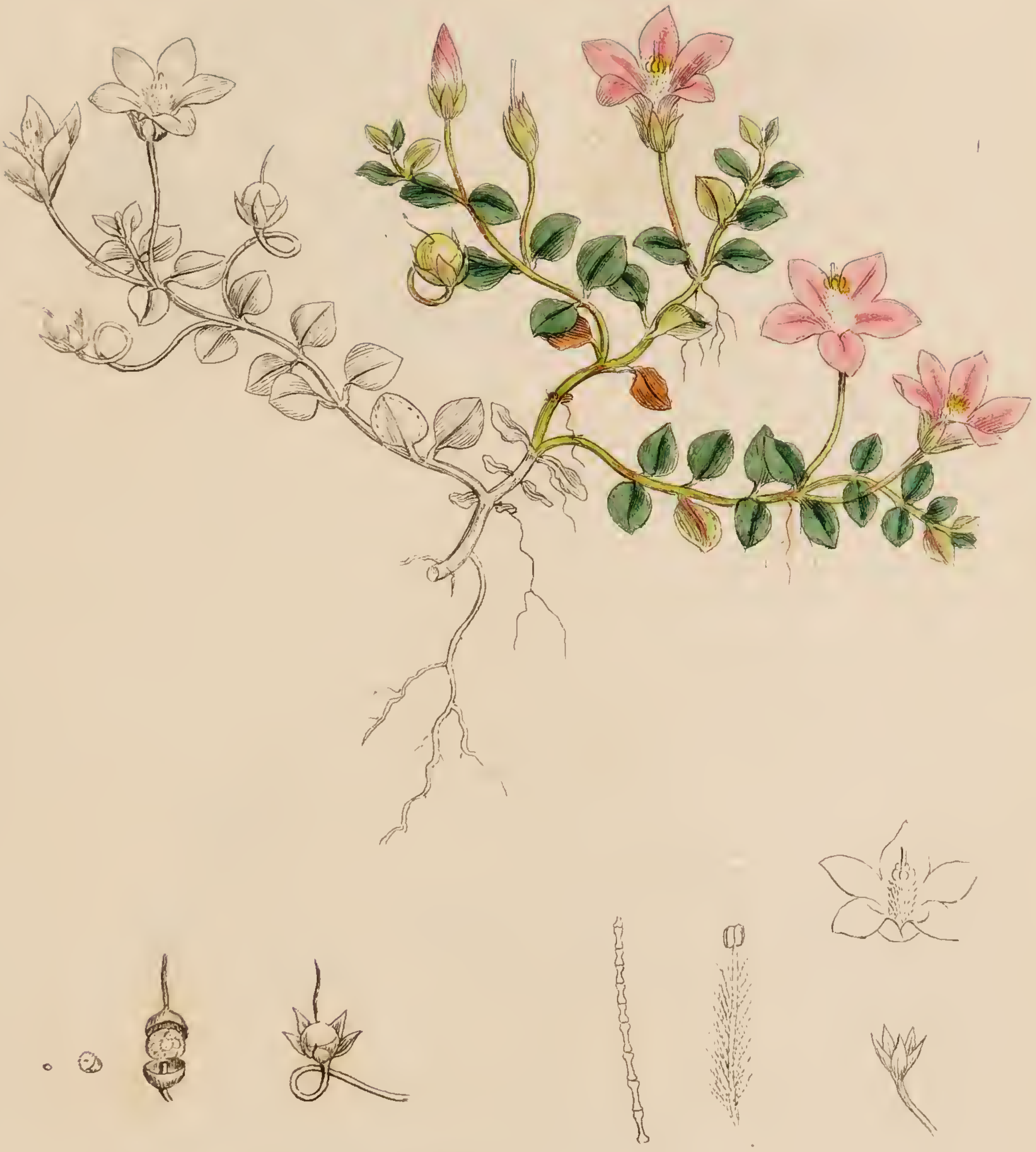
1823



Dec.1.1807. Publish'd by Jas. Sowerby, London.

530

288.

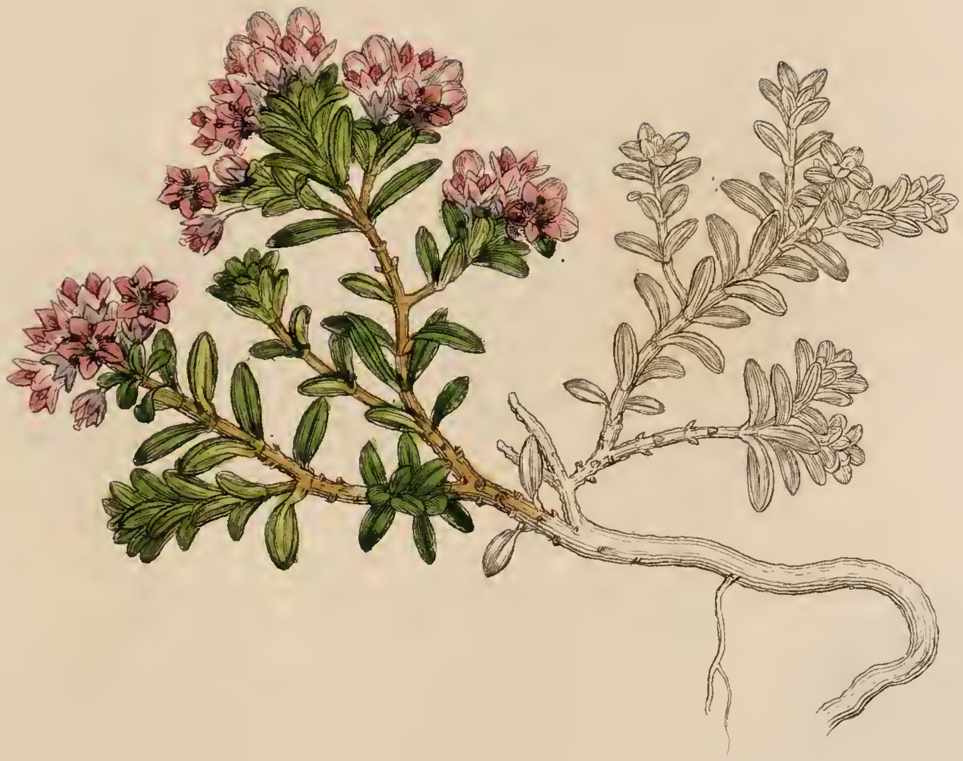


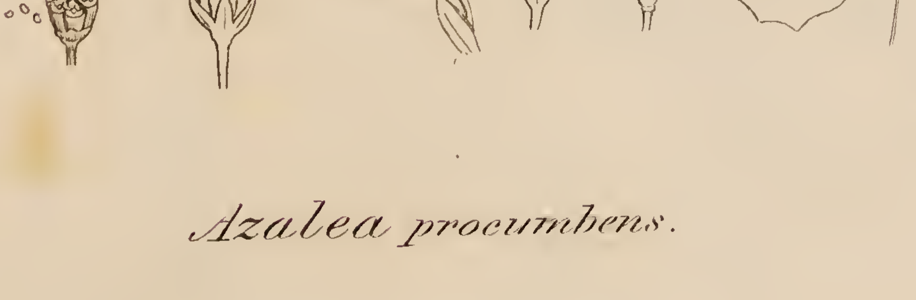
Anagallis tenella.

[illegible] Published by Sowerby London

865

289.



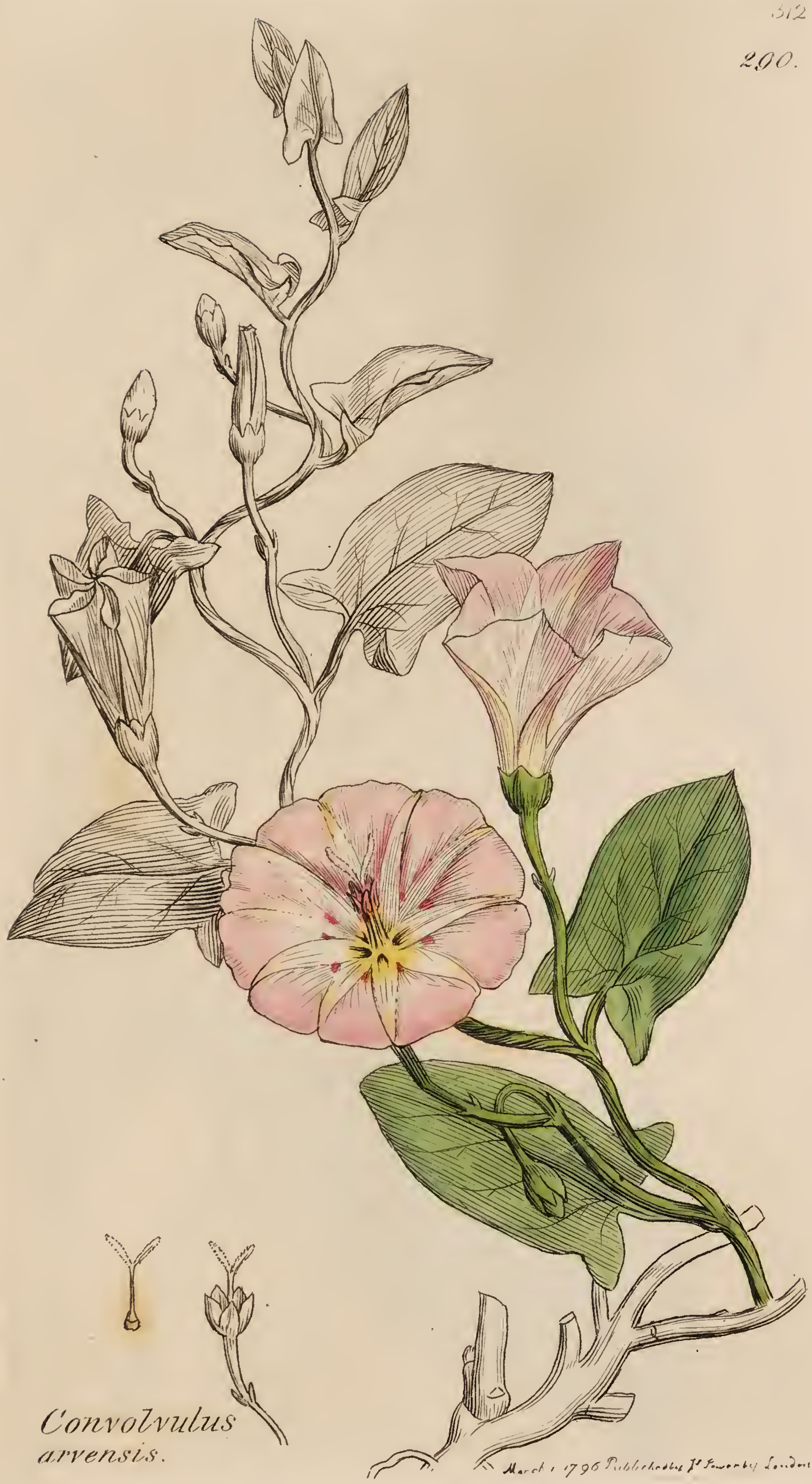


Azalea procumbens.

Apr. 1 1[illegible] Publish'd by J. Sowerby [illegible]

312

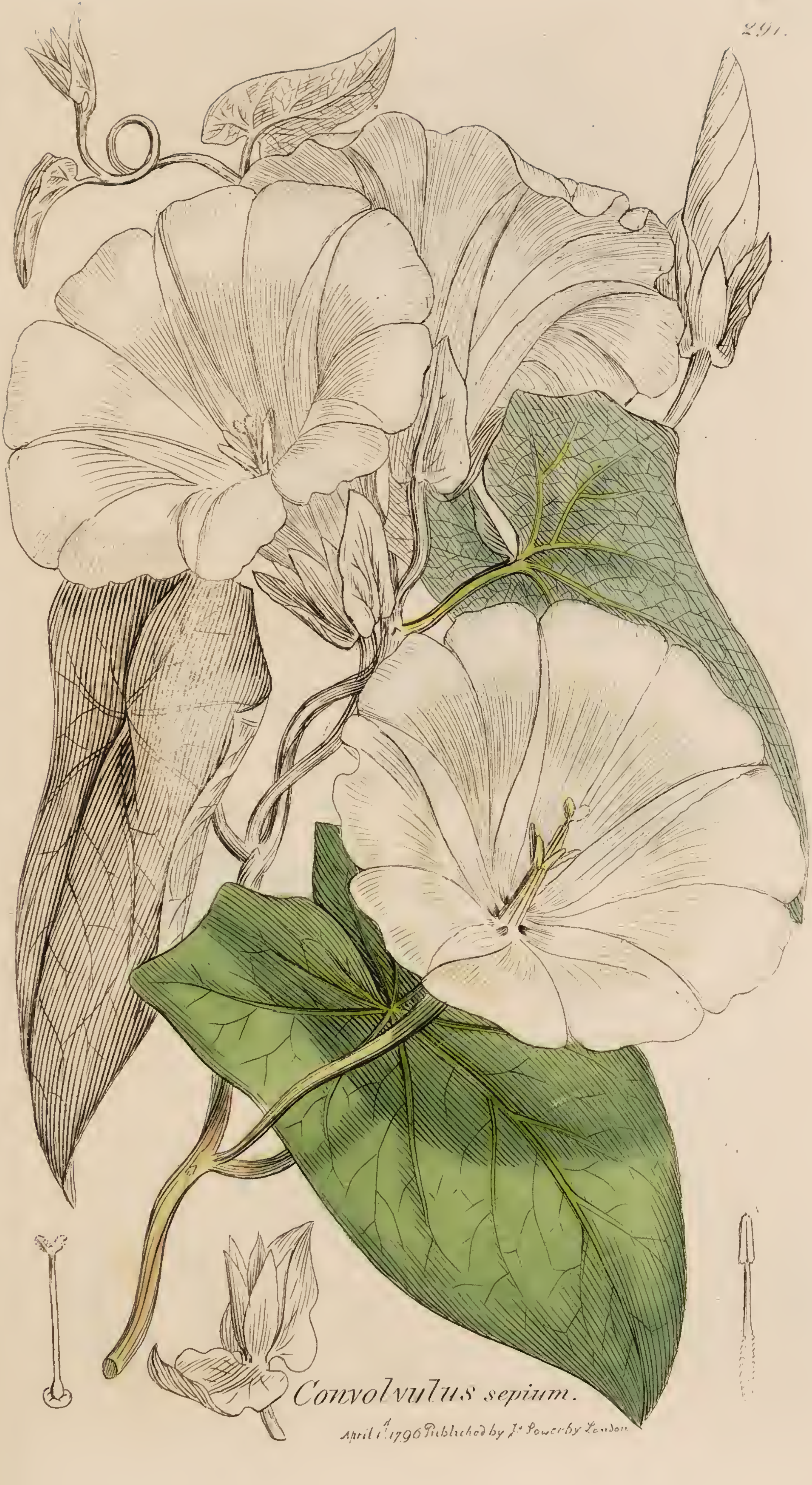
290.



Convolvulus arvensis.

March 1 1796 Published by J. Sowerby London

No 291.

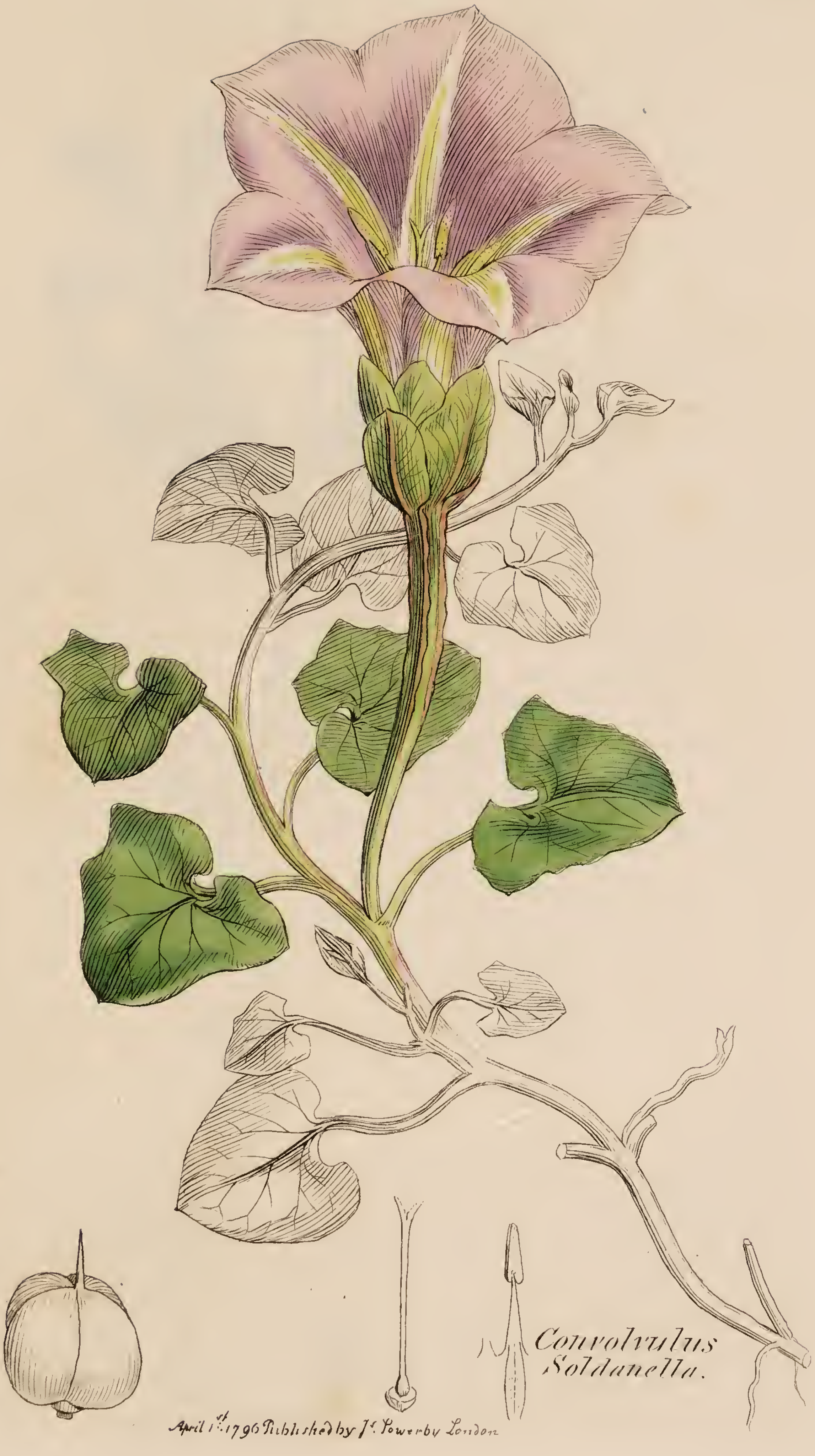


Convolvulus sepium.

April 1st 1796 Published by Jas Sowerby London

314

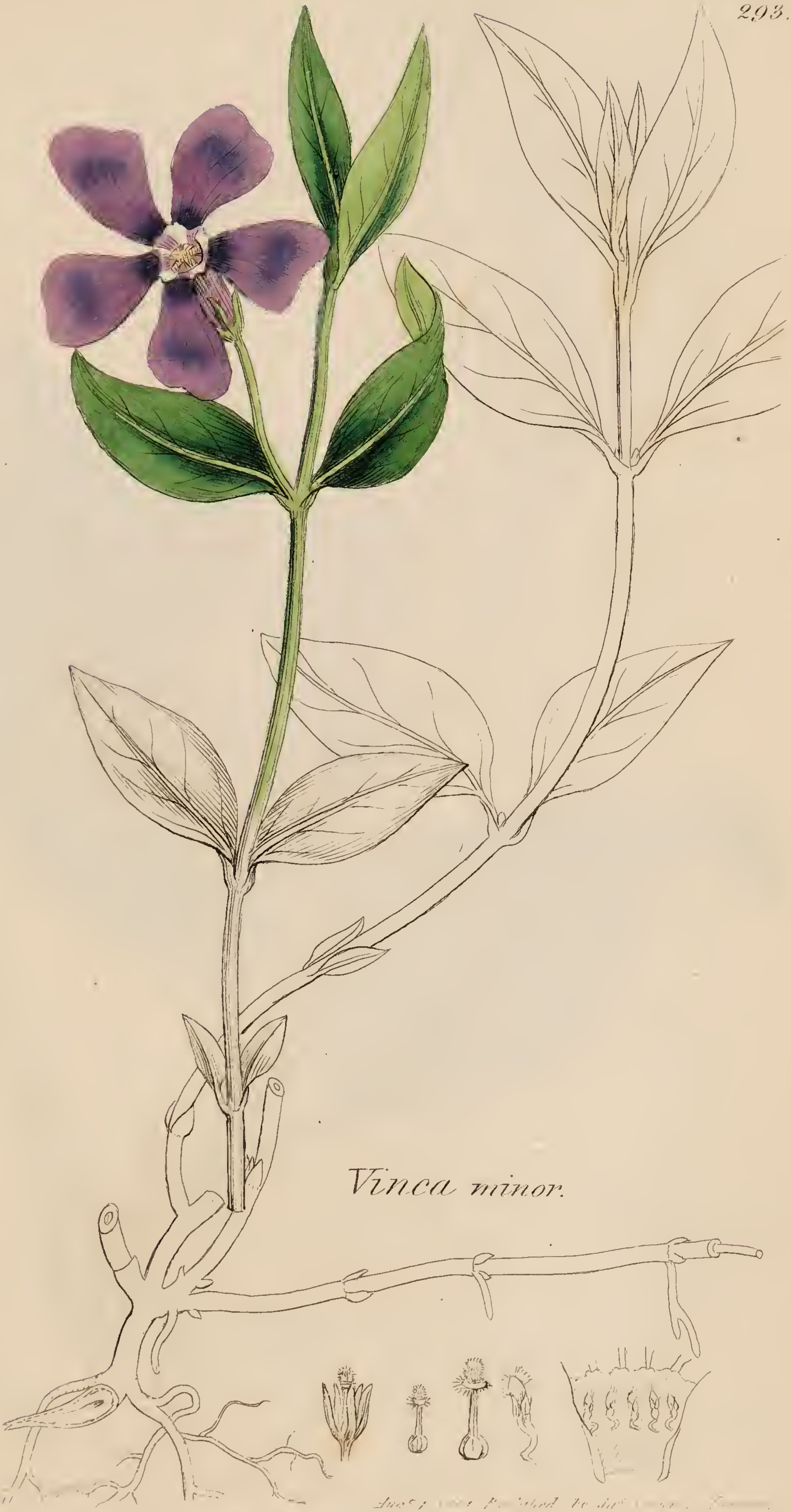
292.



Convolvulus Soldanella.

April 1st 1796 Published by Js. Sowerby London

917,
293.

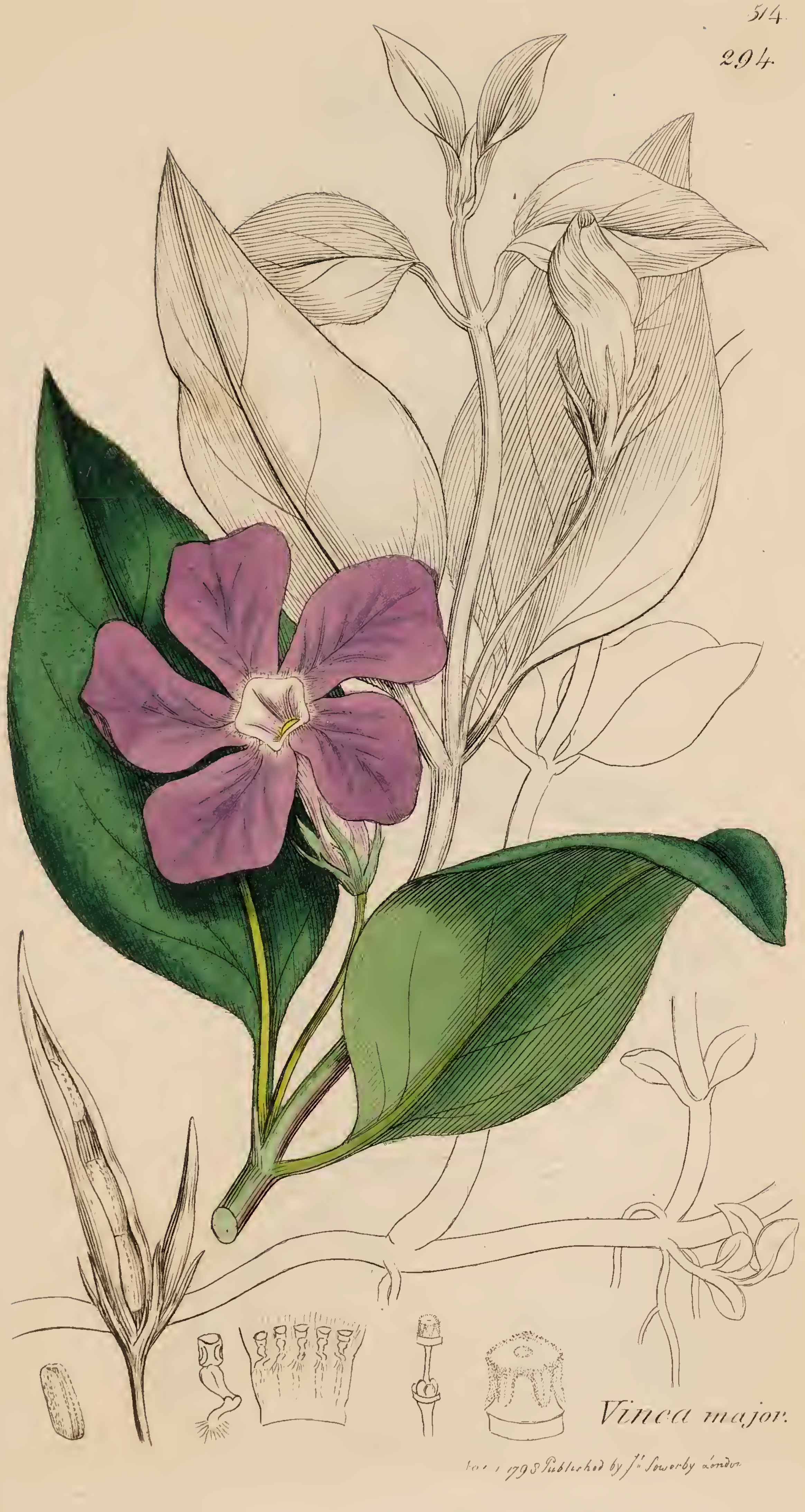


Vinca minor.

Augt 1 [illegible] Published by Jno [illegible] London.

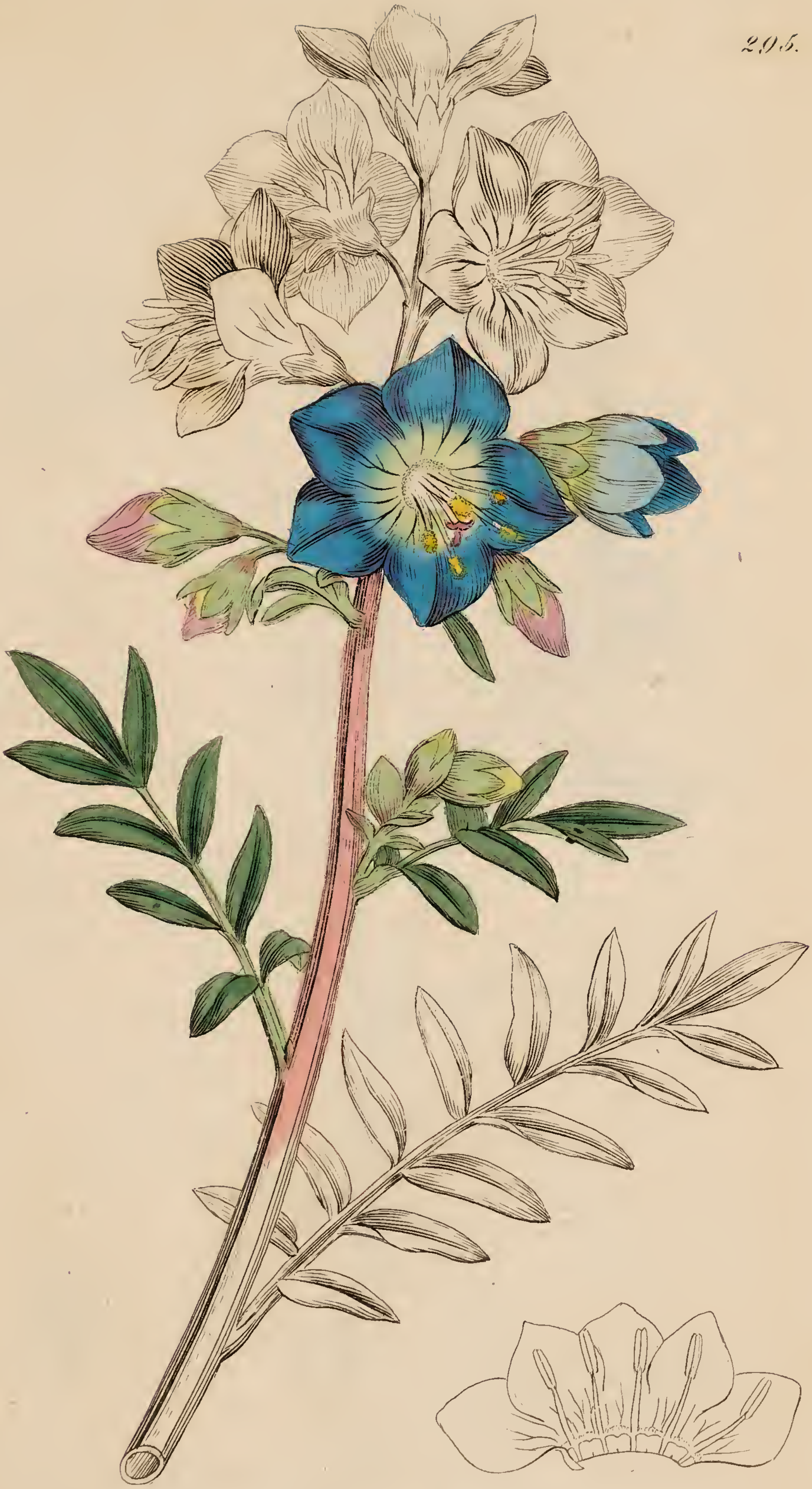
514.

294.



Vinca major.

Jan 1 1798 Published by Jas Sowerby London

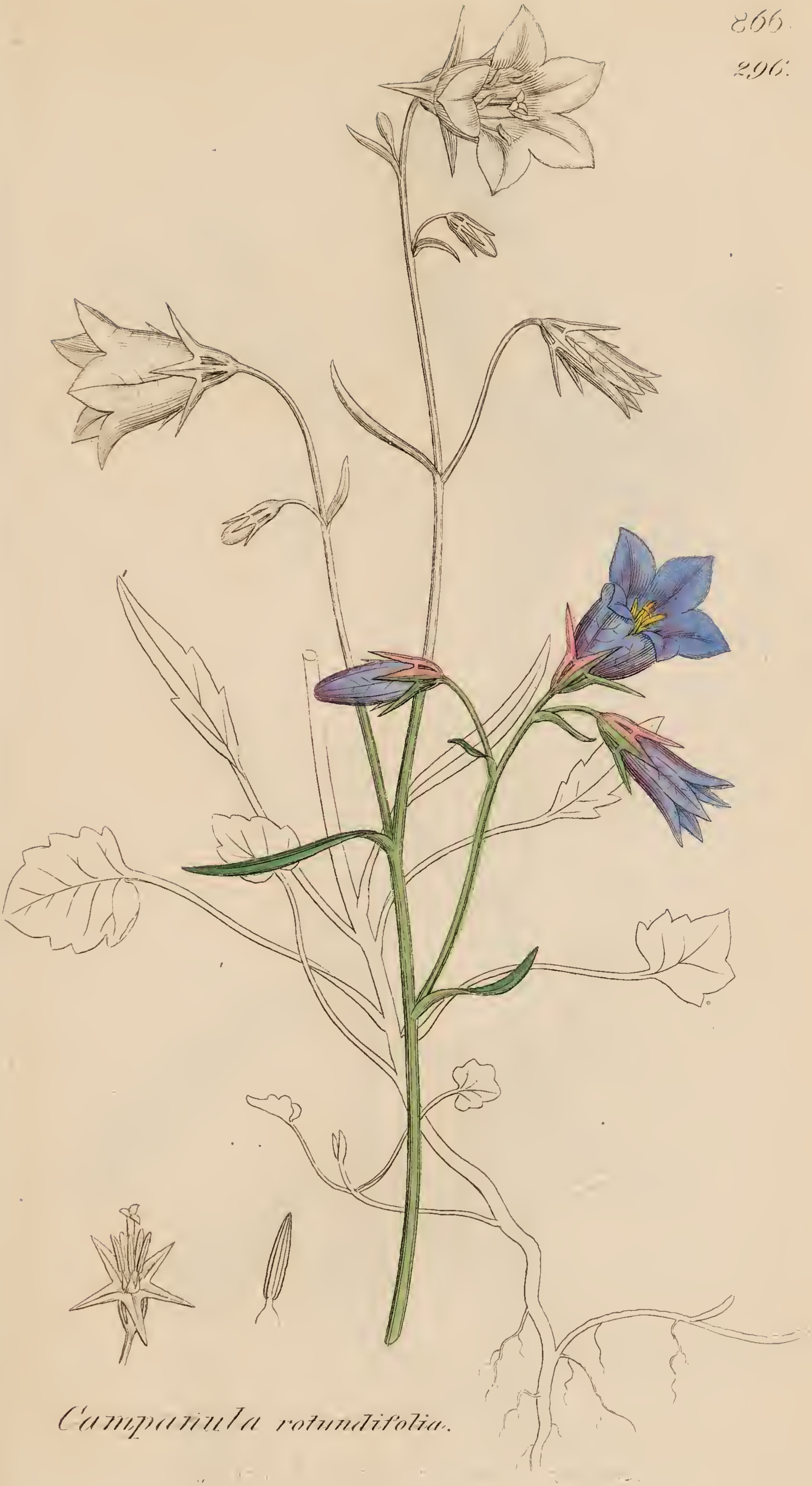


Polemonium cæruleum.

J. Sowerby delt. April 1 1791

866.

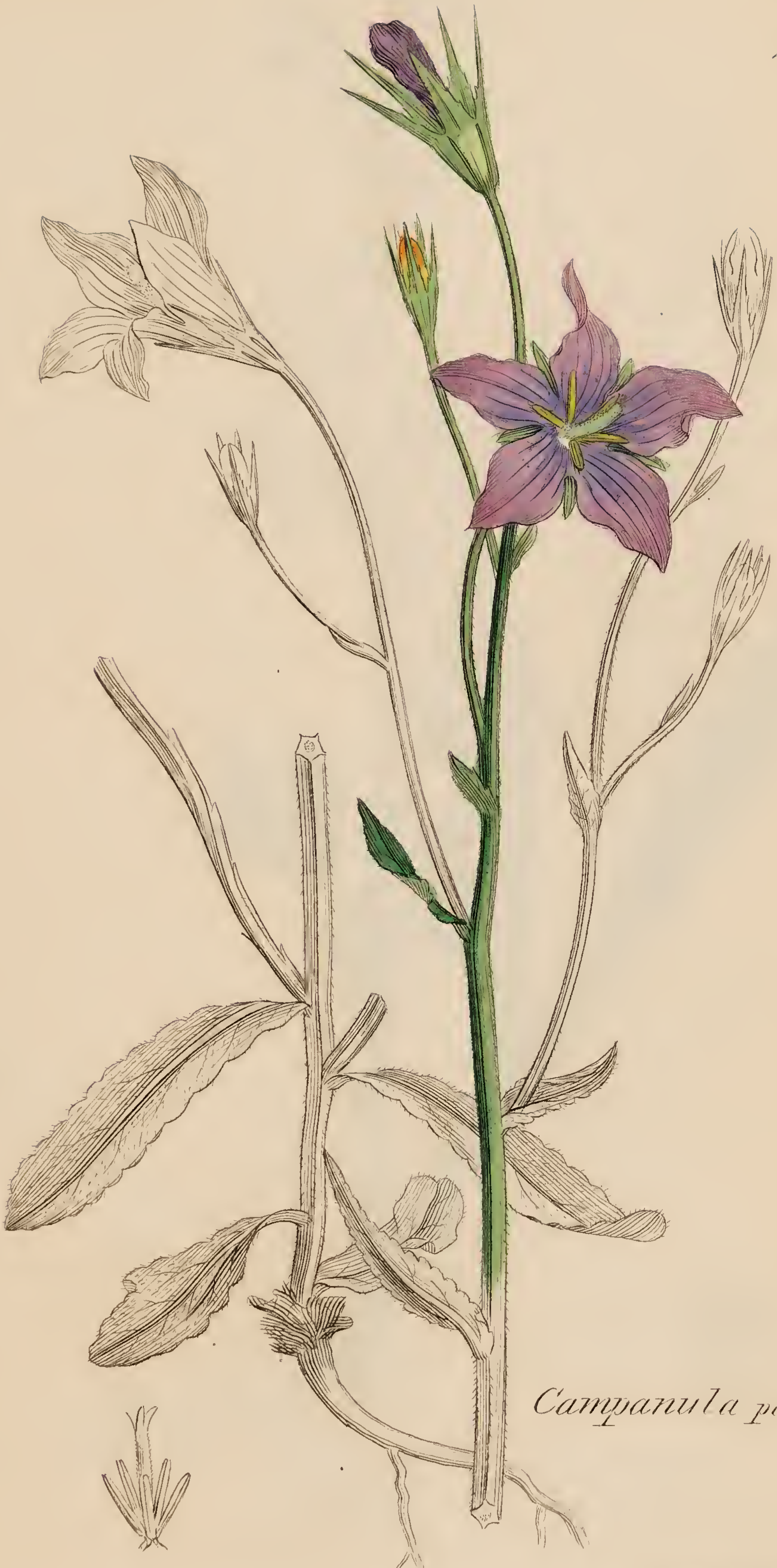
296.



Campanula rotundifolia.

42

2.97.

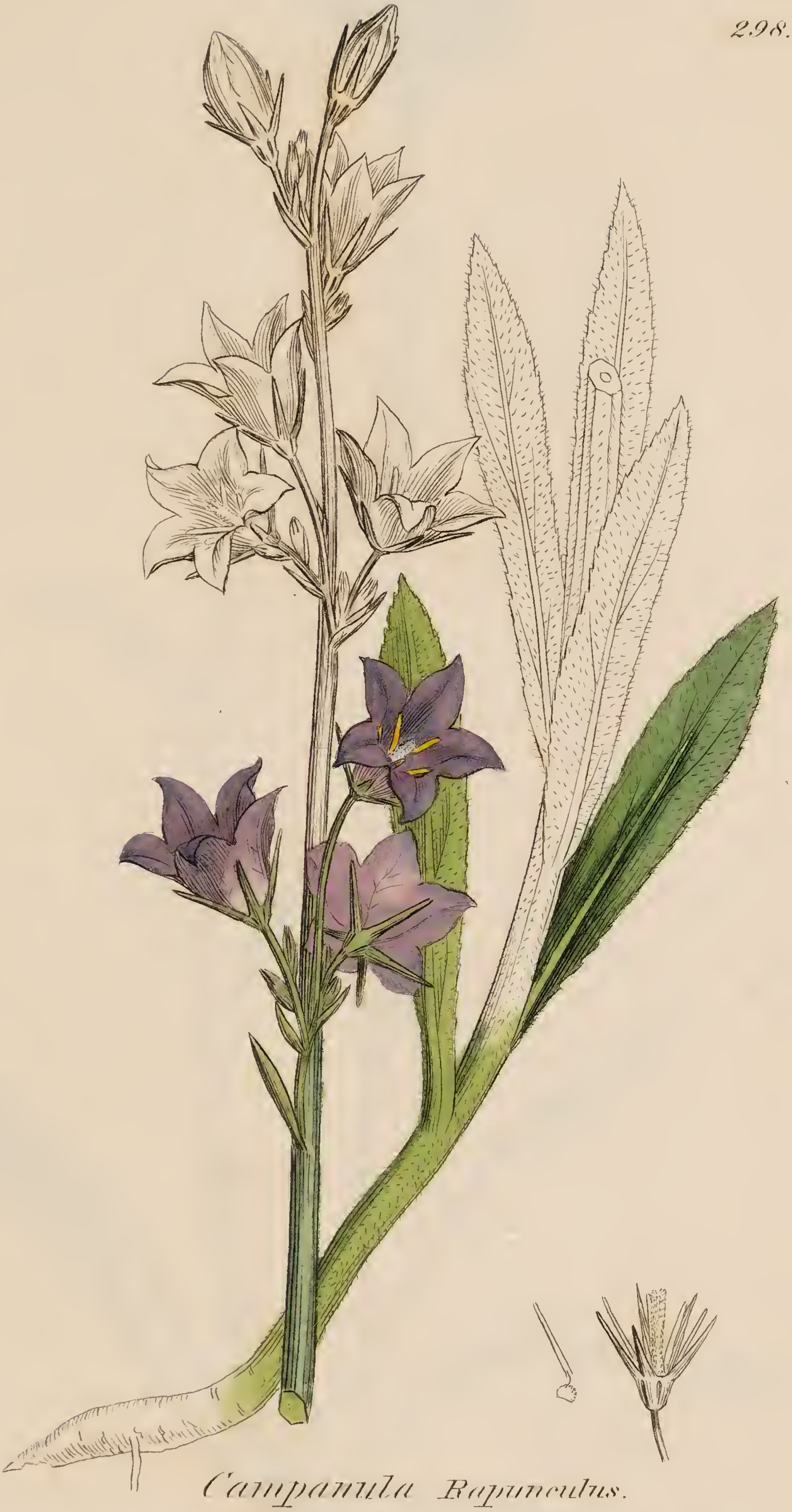


Campanula patula.

[illegible]

283

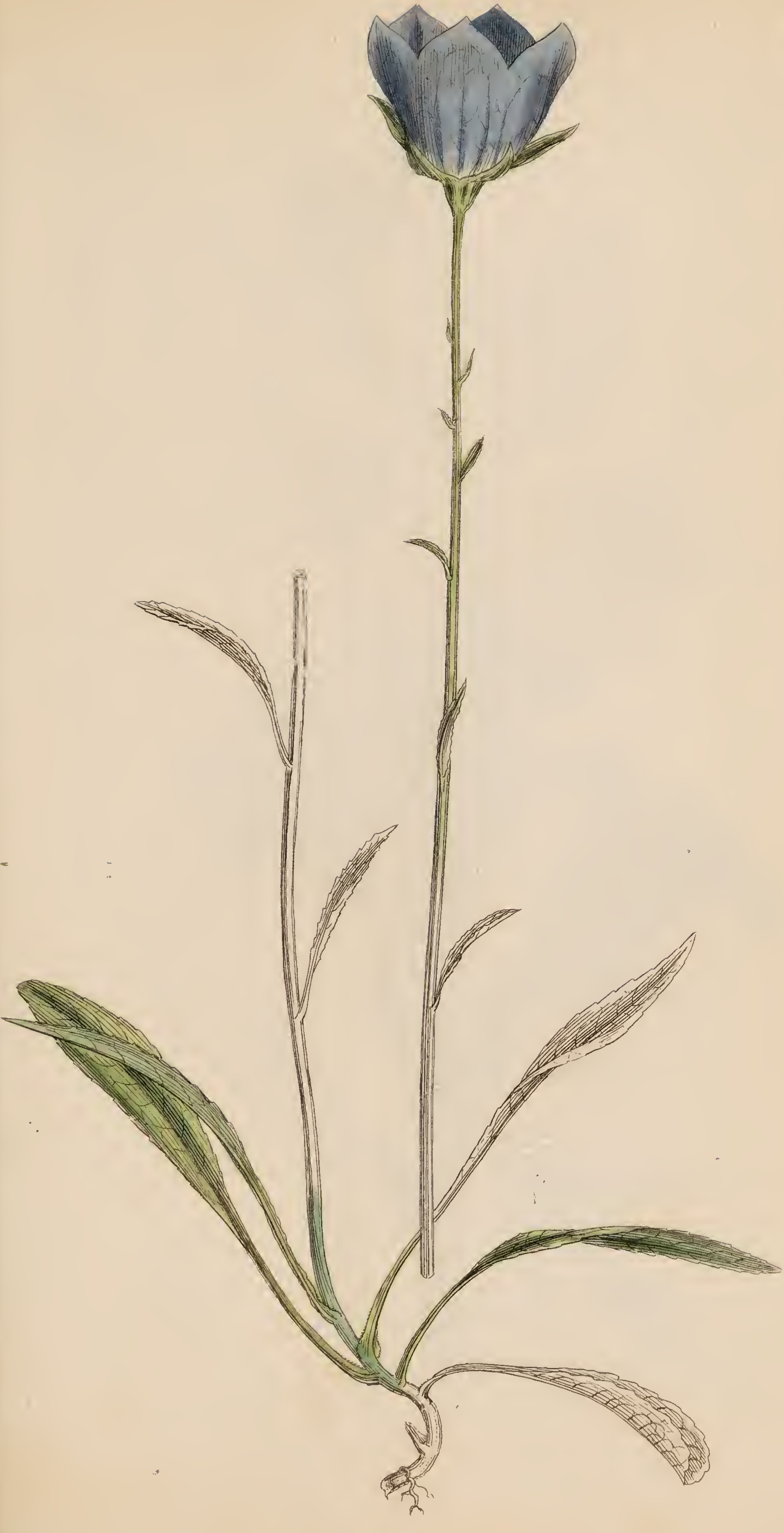
2.98.



Campanula Rapunculus.

[illegible] London

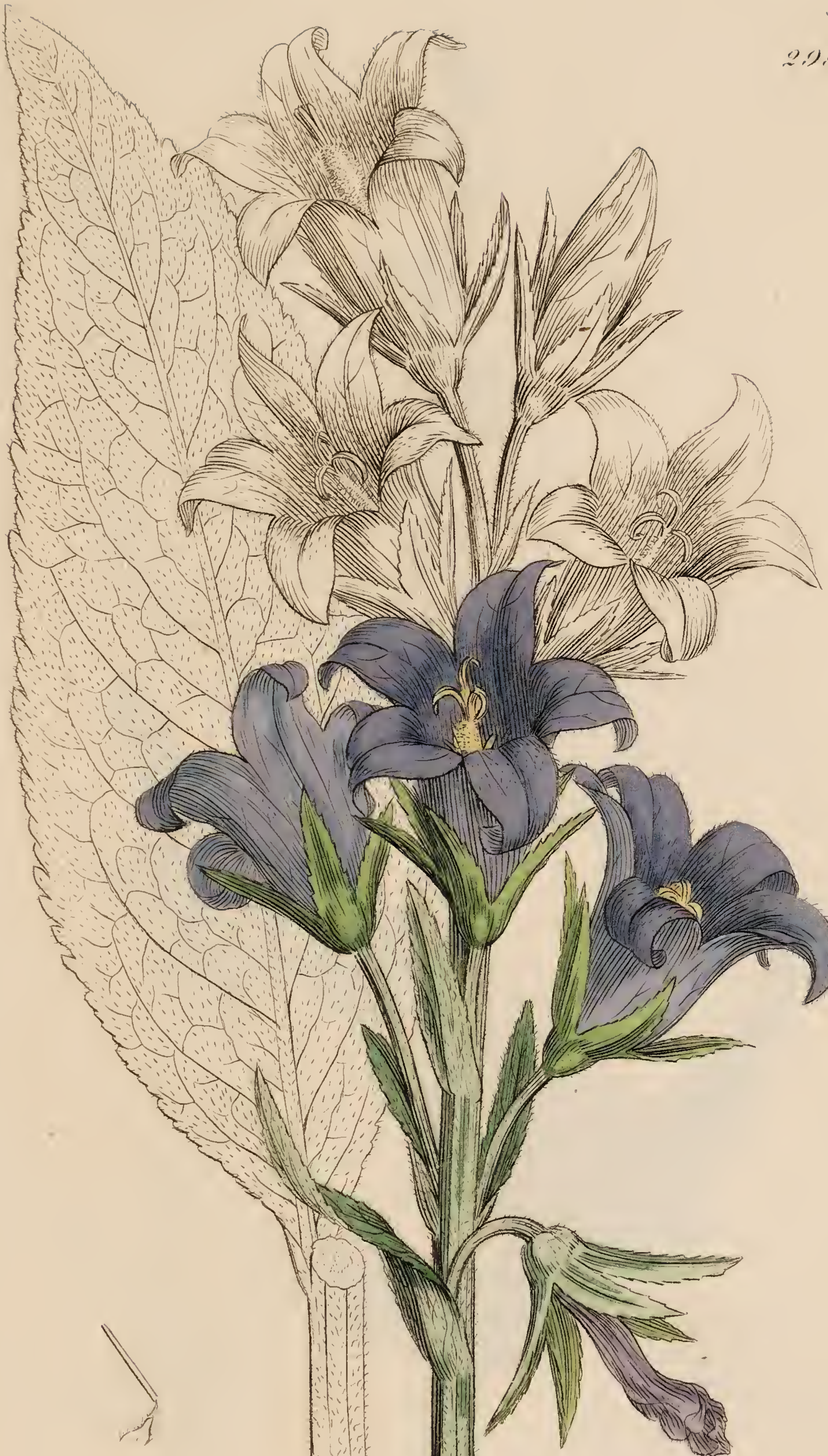
2773.



July 1st 1833.

302.

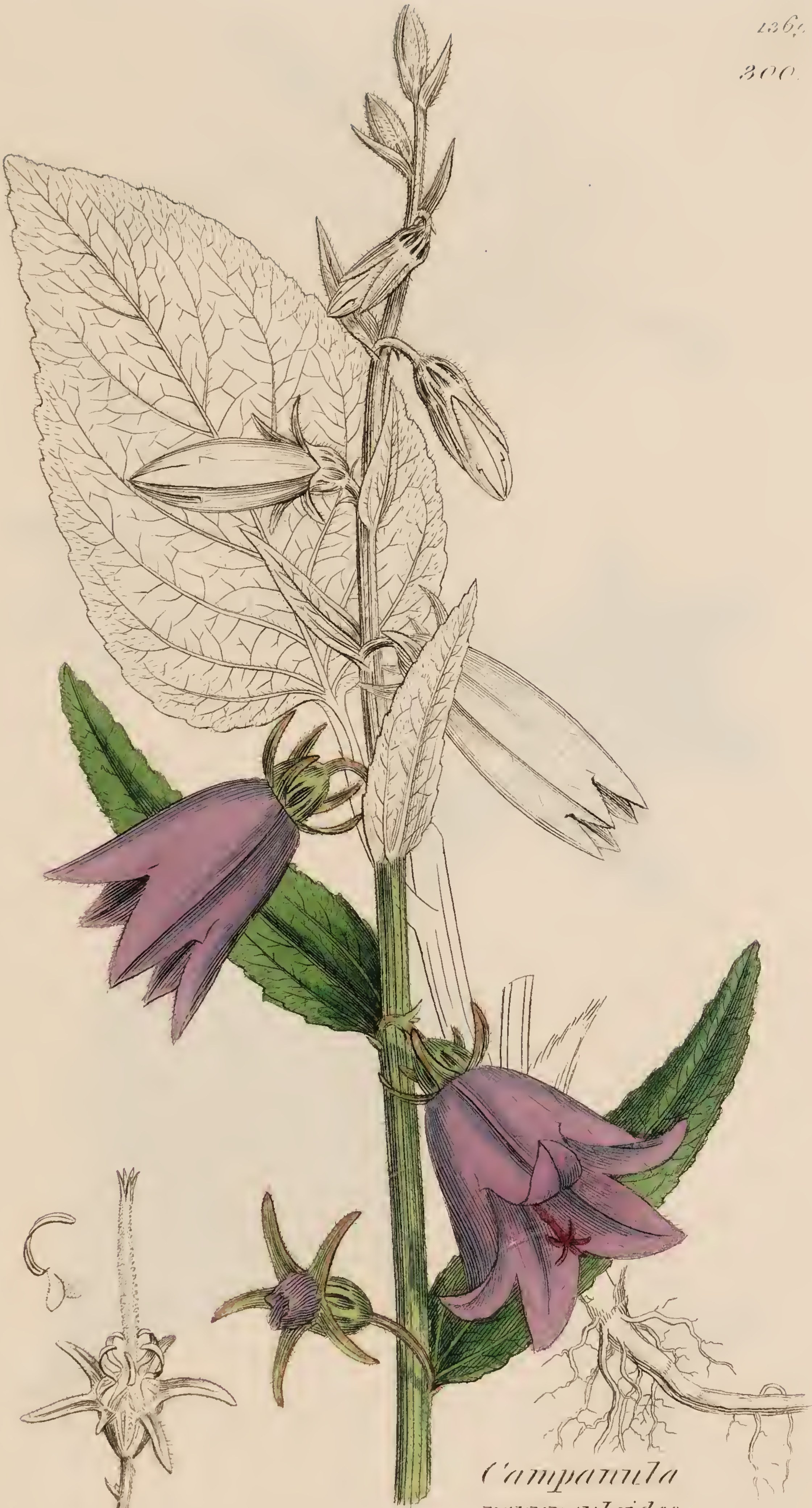
299.



Campanula latifolia

1369.

300.

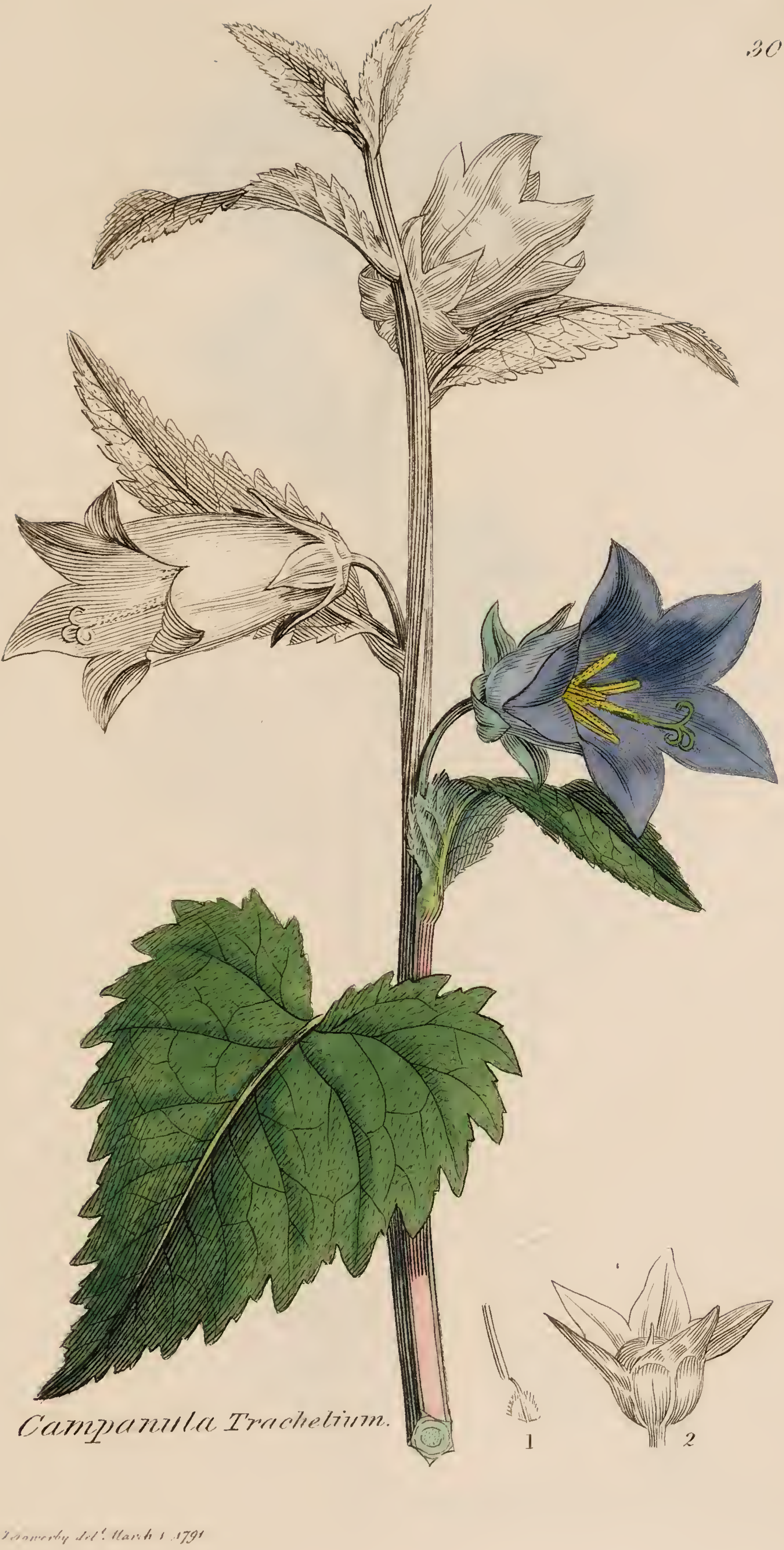


Campanula rapunculoides.

Oct 1 1804 Publish'd by J. Sowerby London.

12

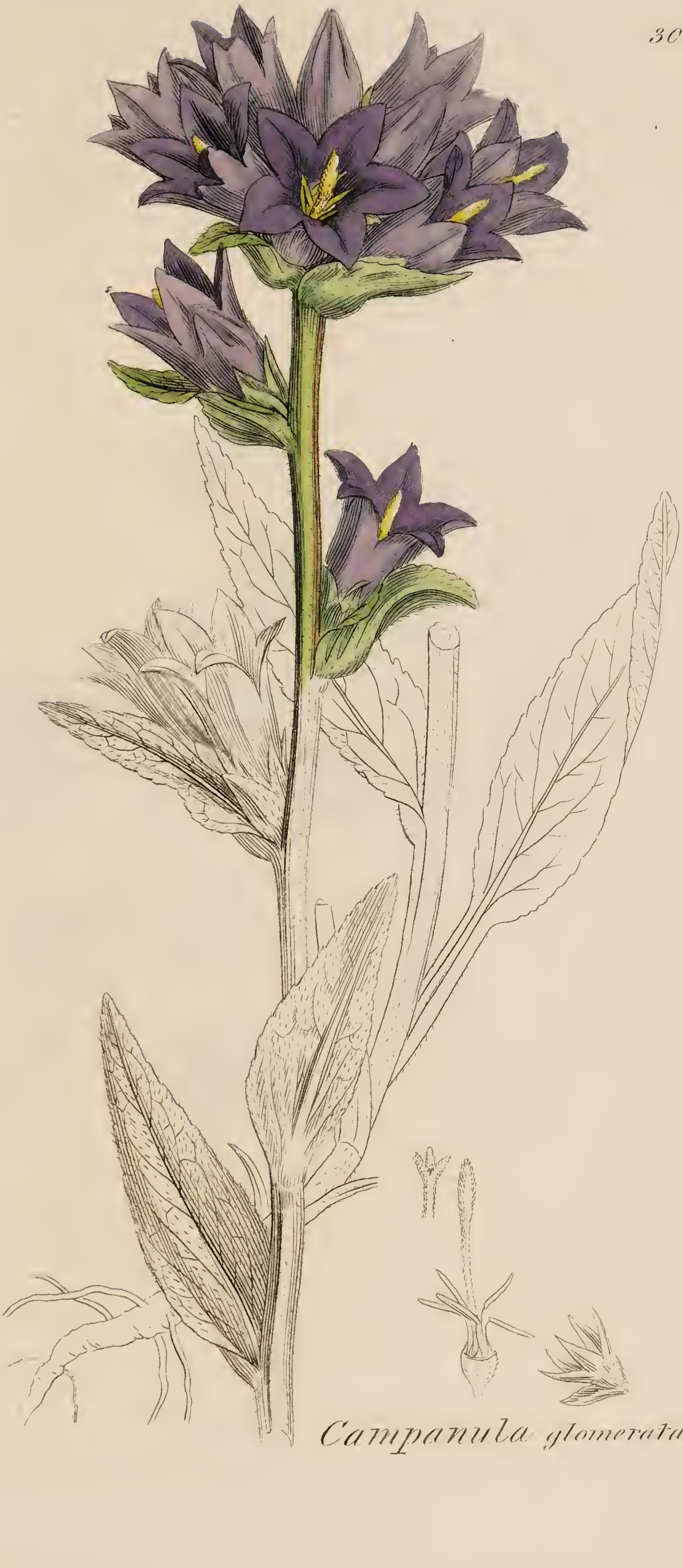
301.



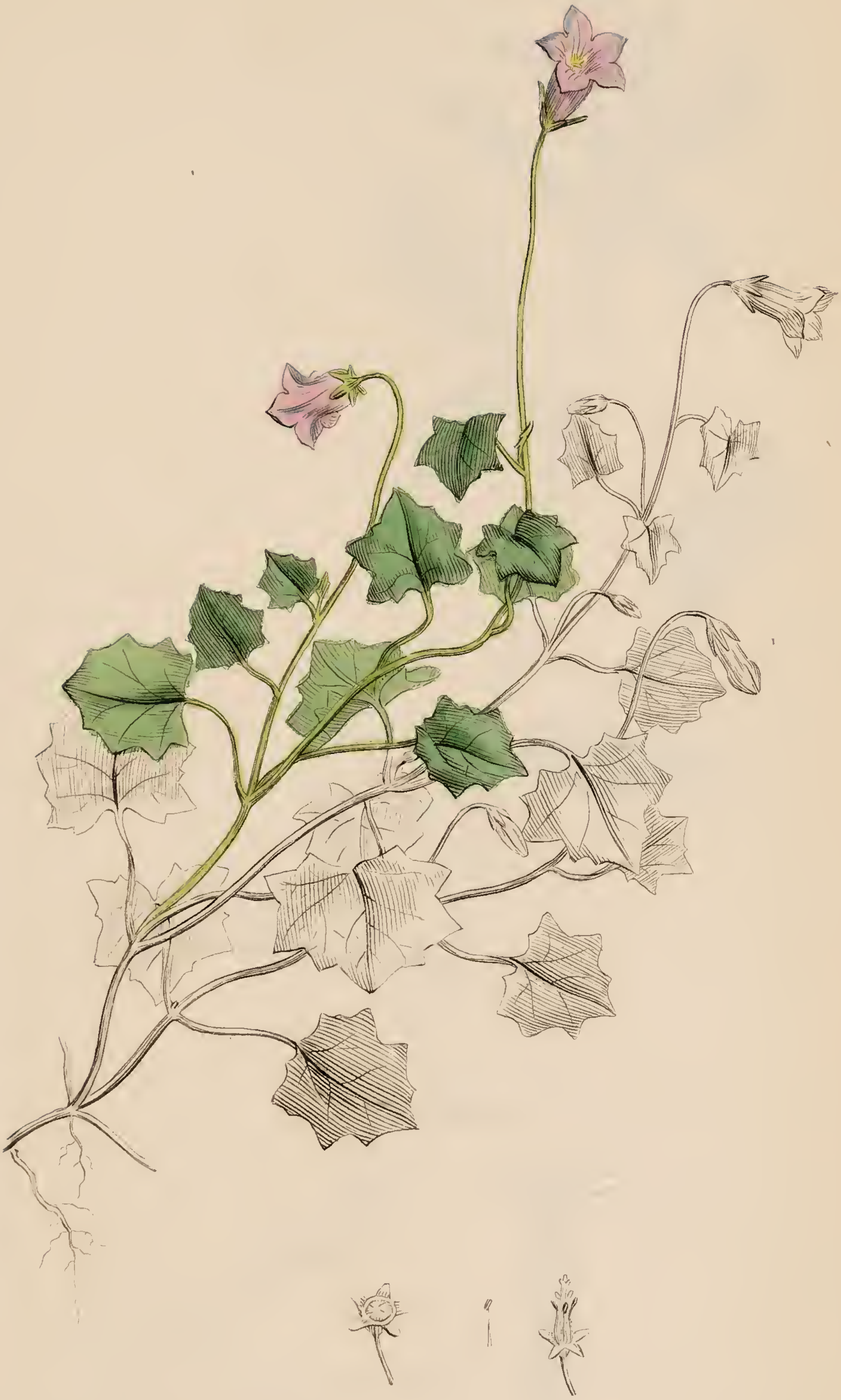
Campanula Trachelium.

J. Sowerby del. March 1. 1791

302.



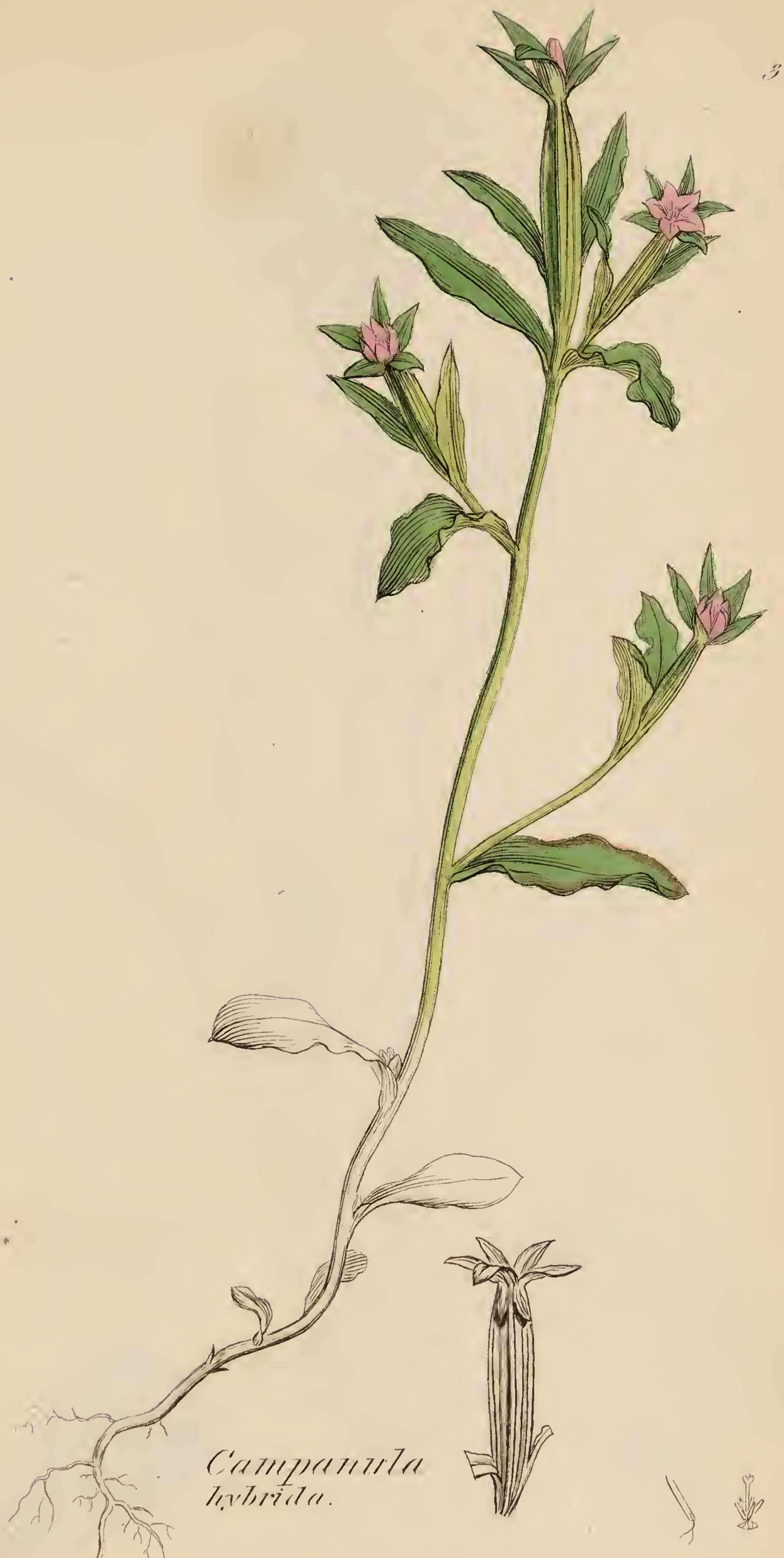
Campanula glomerata.



Campanula hederacea .

370.

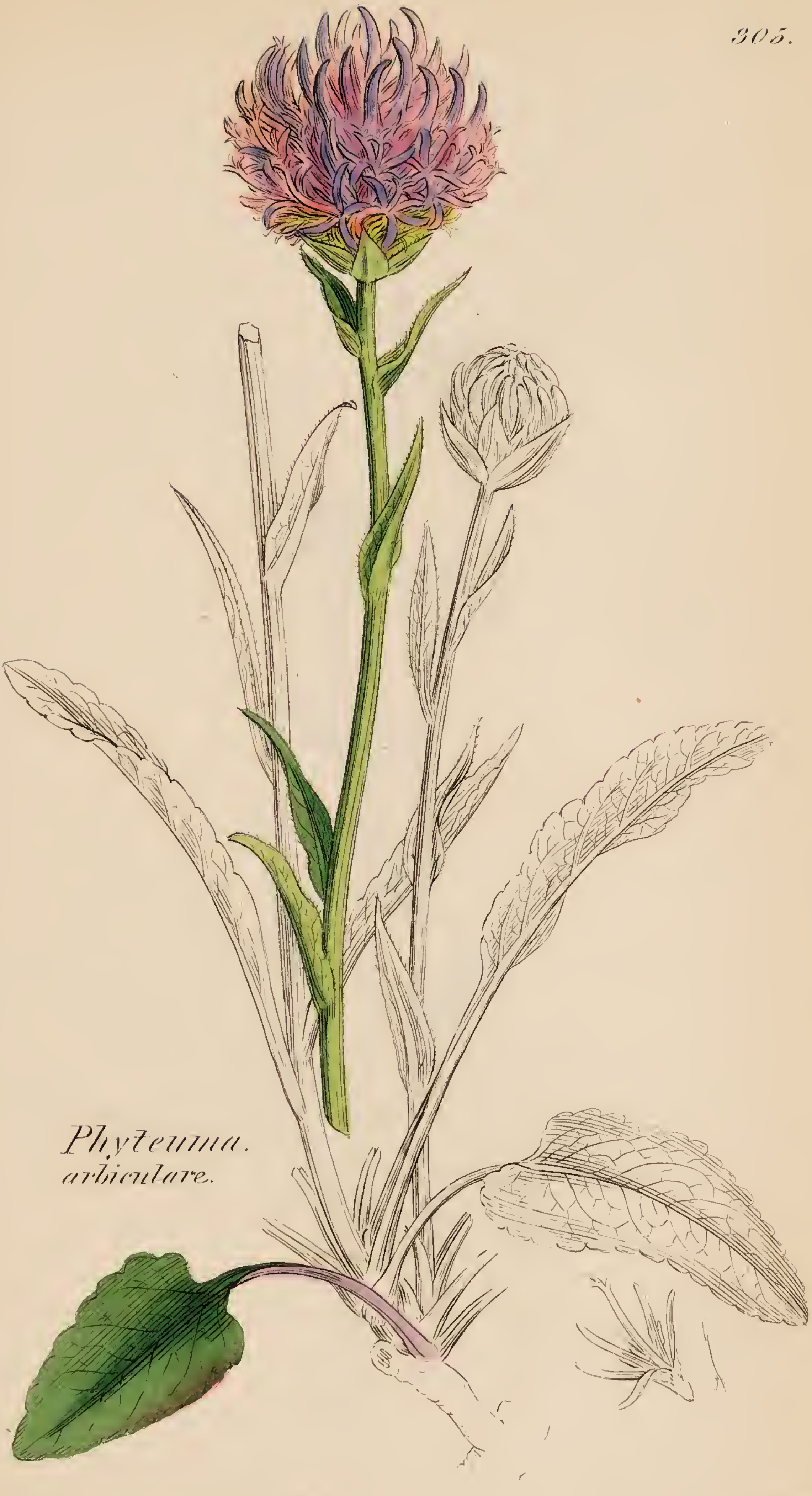
304.



Campanula hybrida.

[illegible] Publish'd by Js Sowerby London.

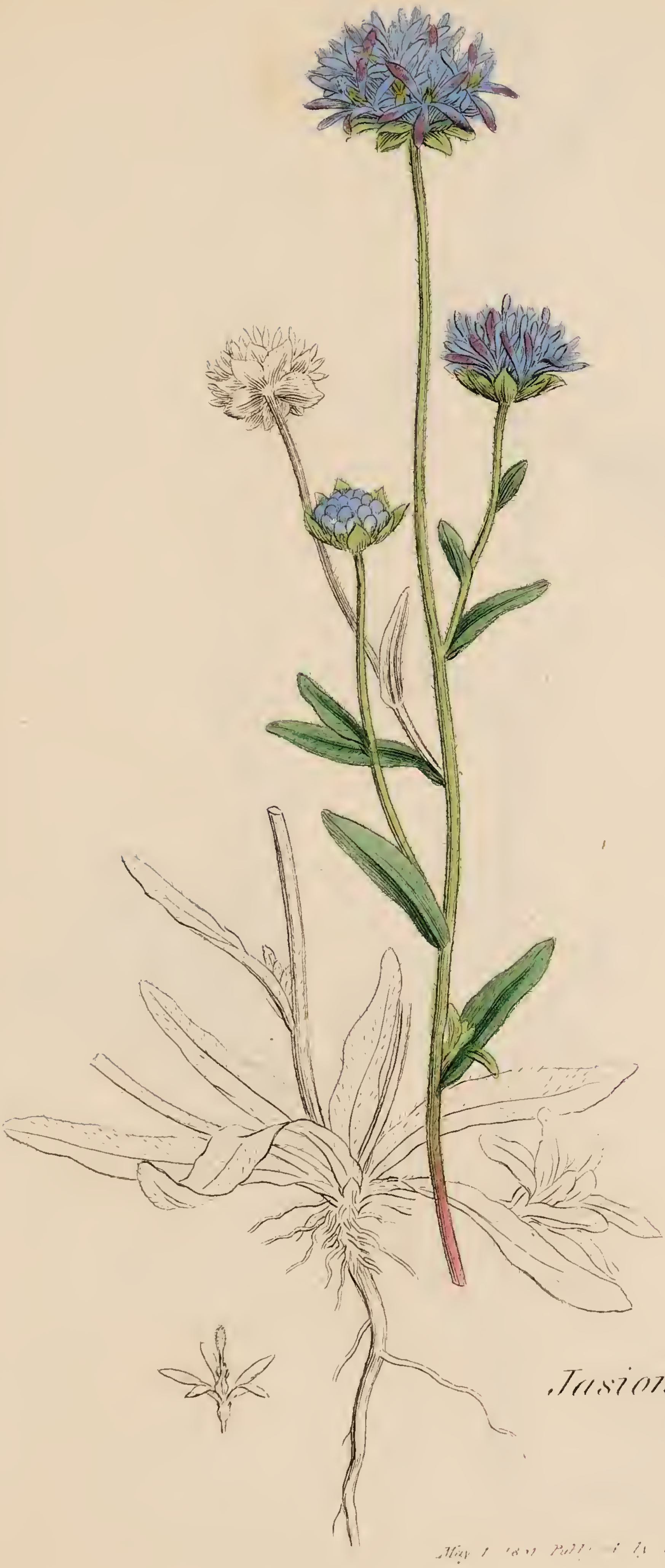
305.



Phyteuma.
orbiculare.

882

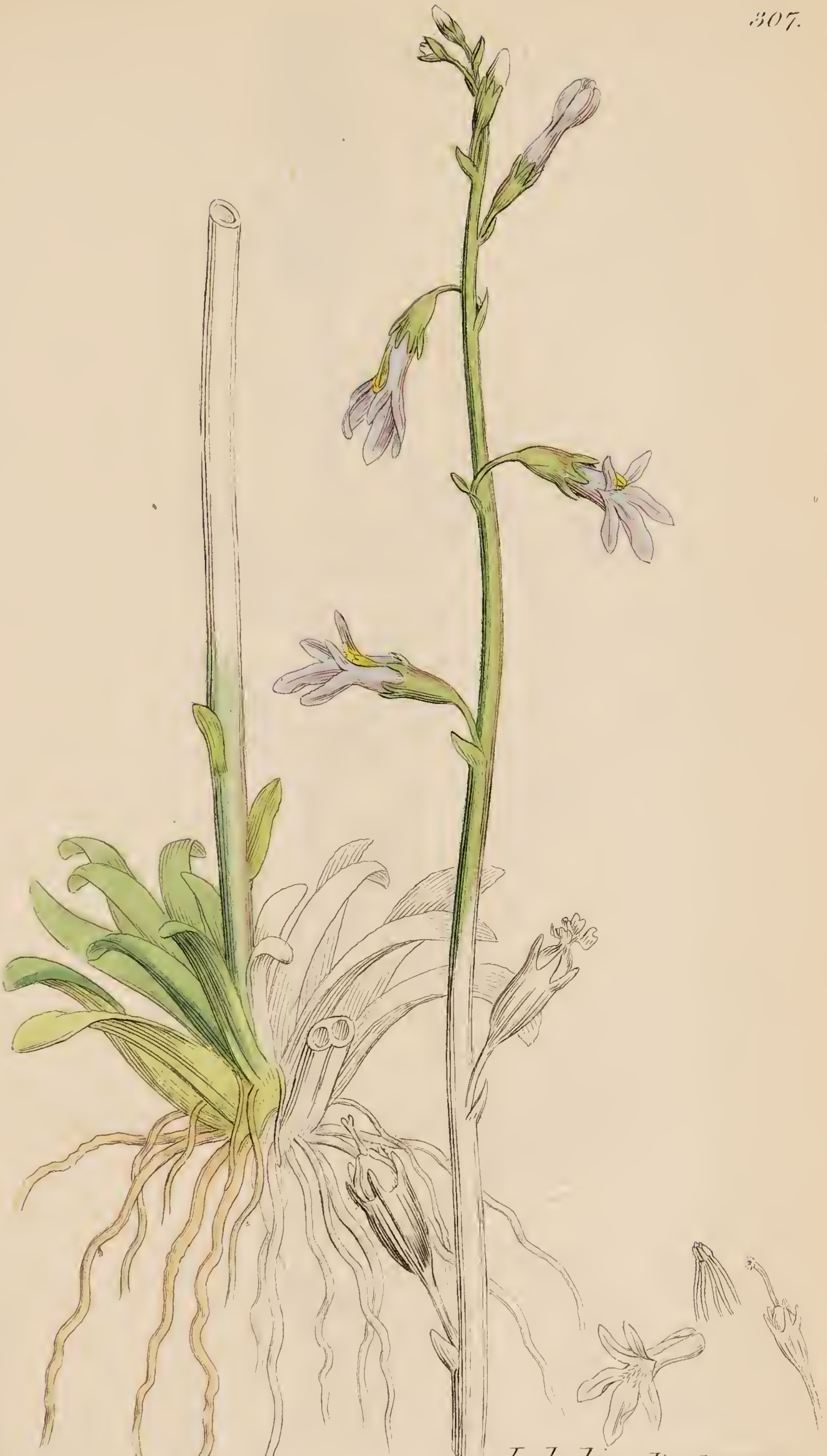
306.



Jasione montana.

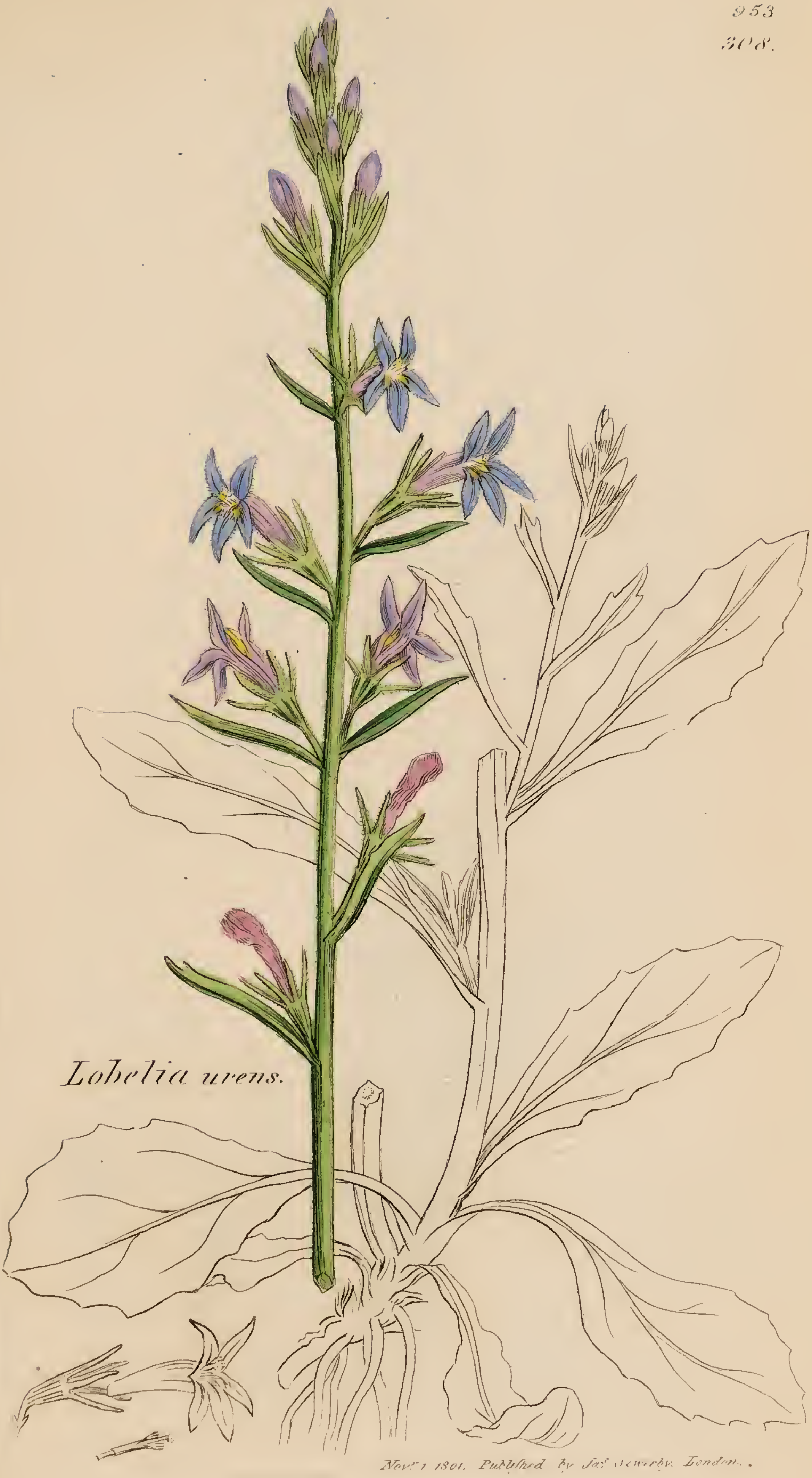
May 1. 1801 Publ.d by Ja.s Sowerby Lond.

140.
307.



Lobelia Dortmanna

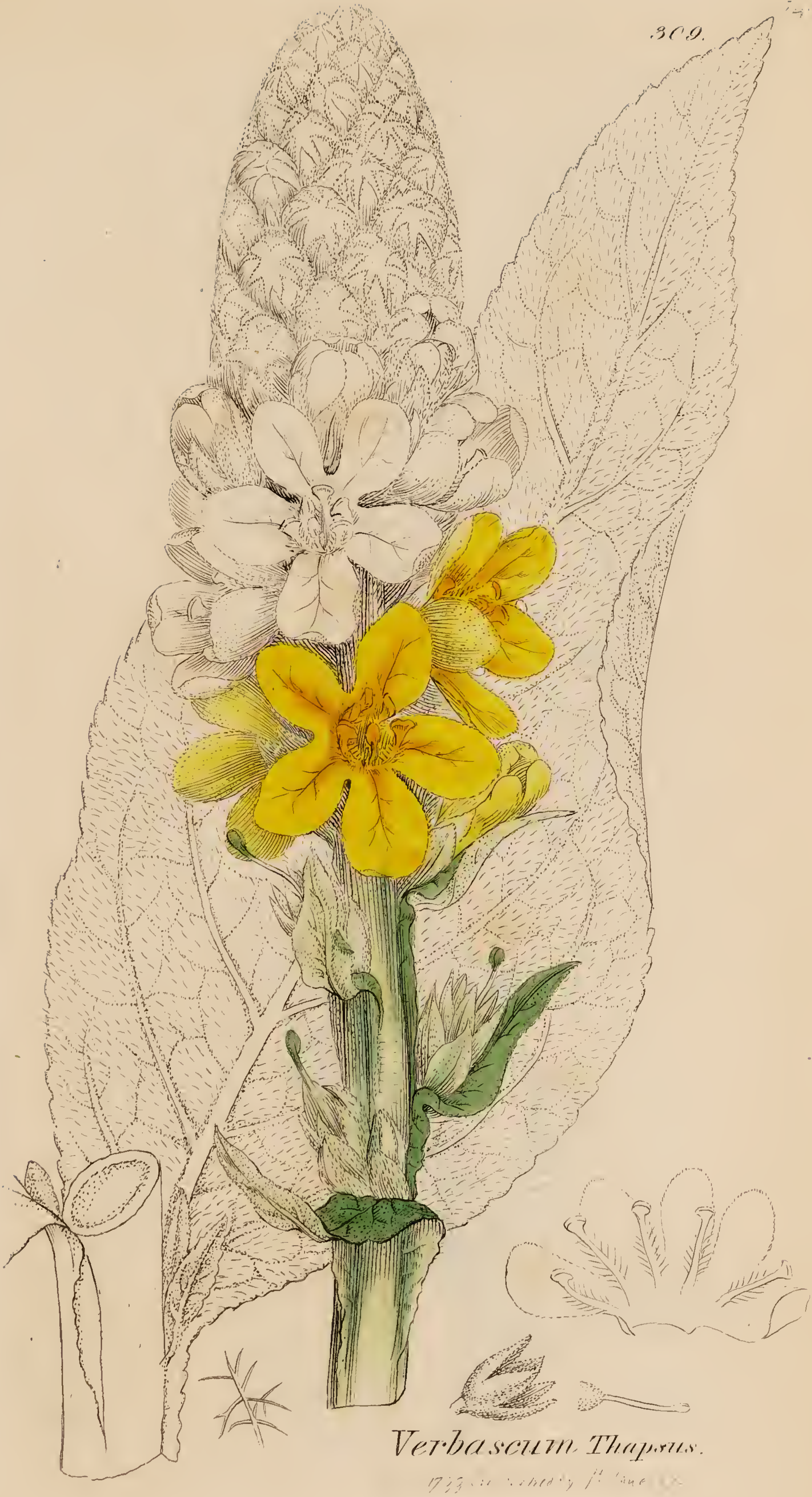
Sowerb. delt. Oct 1 1793.



Lobelia urens.

Novr 1 1801. Published by Jas Sowerby London.

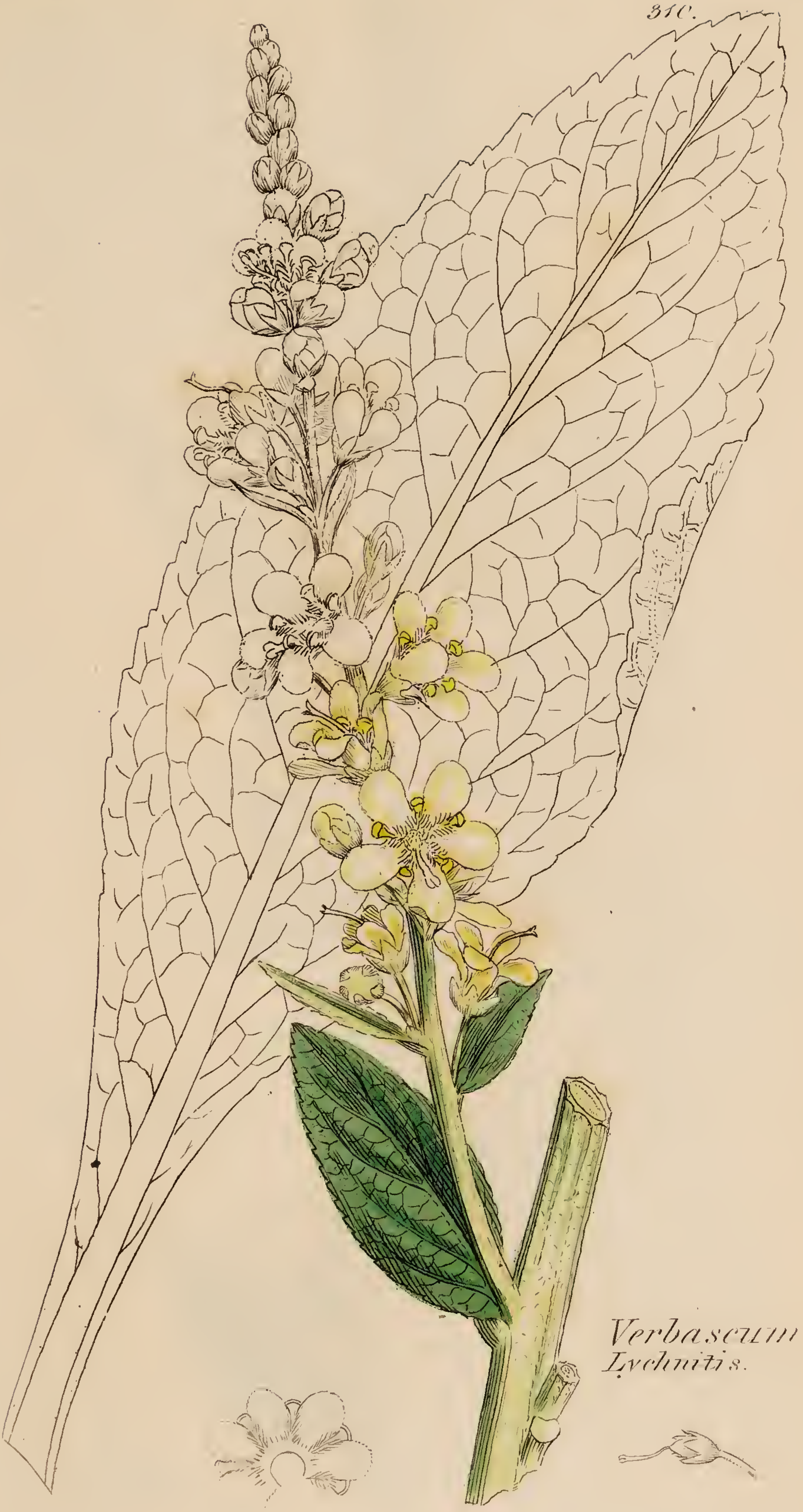
309.



Verbascum Thapsus.

1793 [illegible] lished by J^s [illegible]

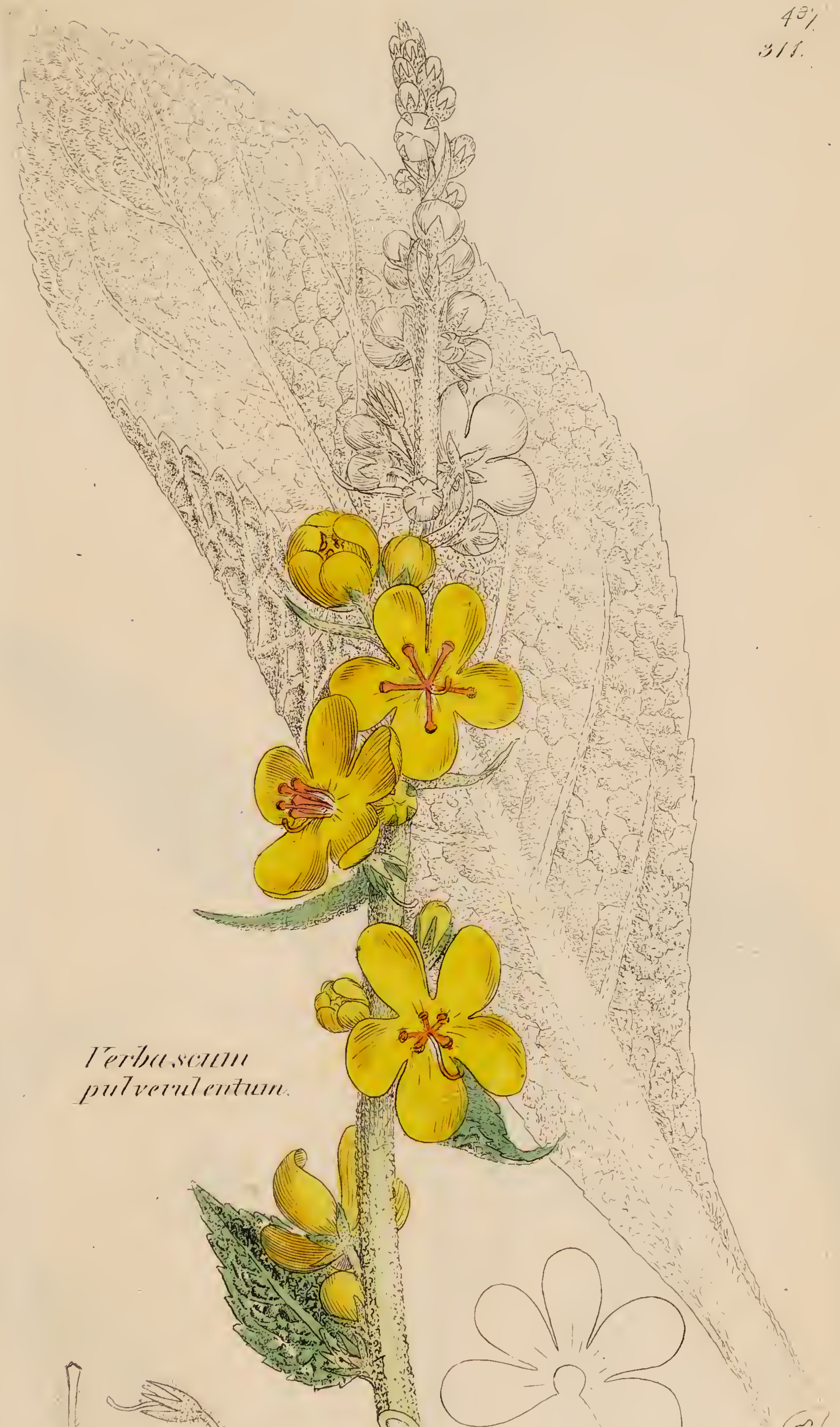
310.



Verbascum Lychnitis.

437

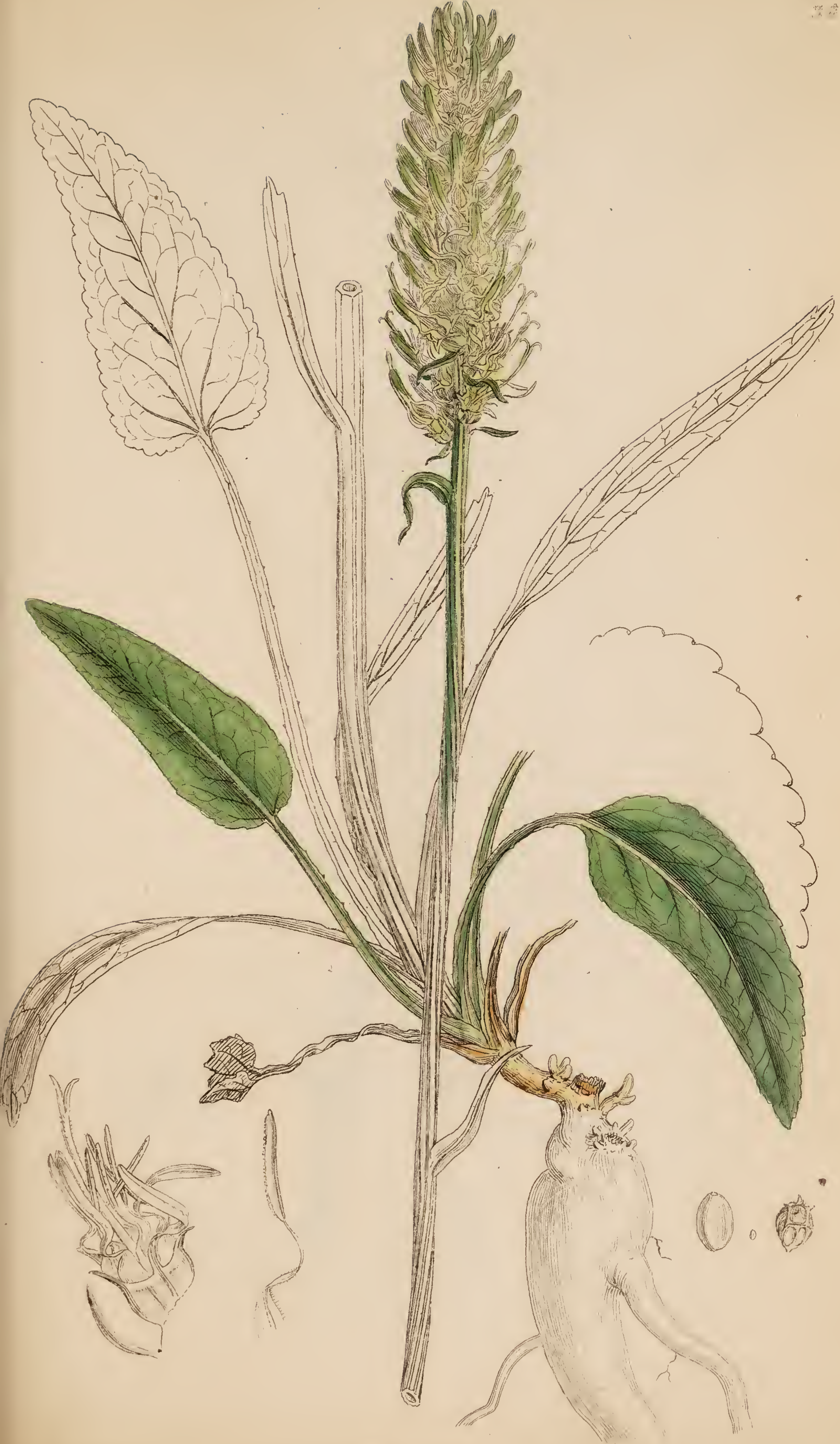
311.



Verbascum pulverulentum.

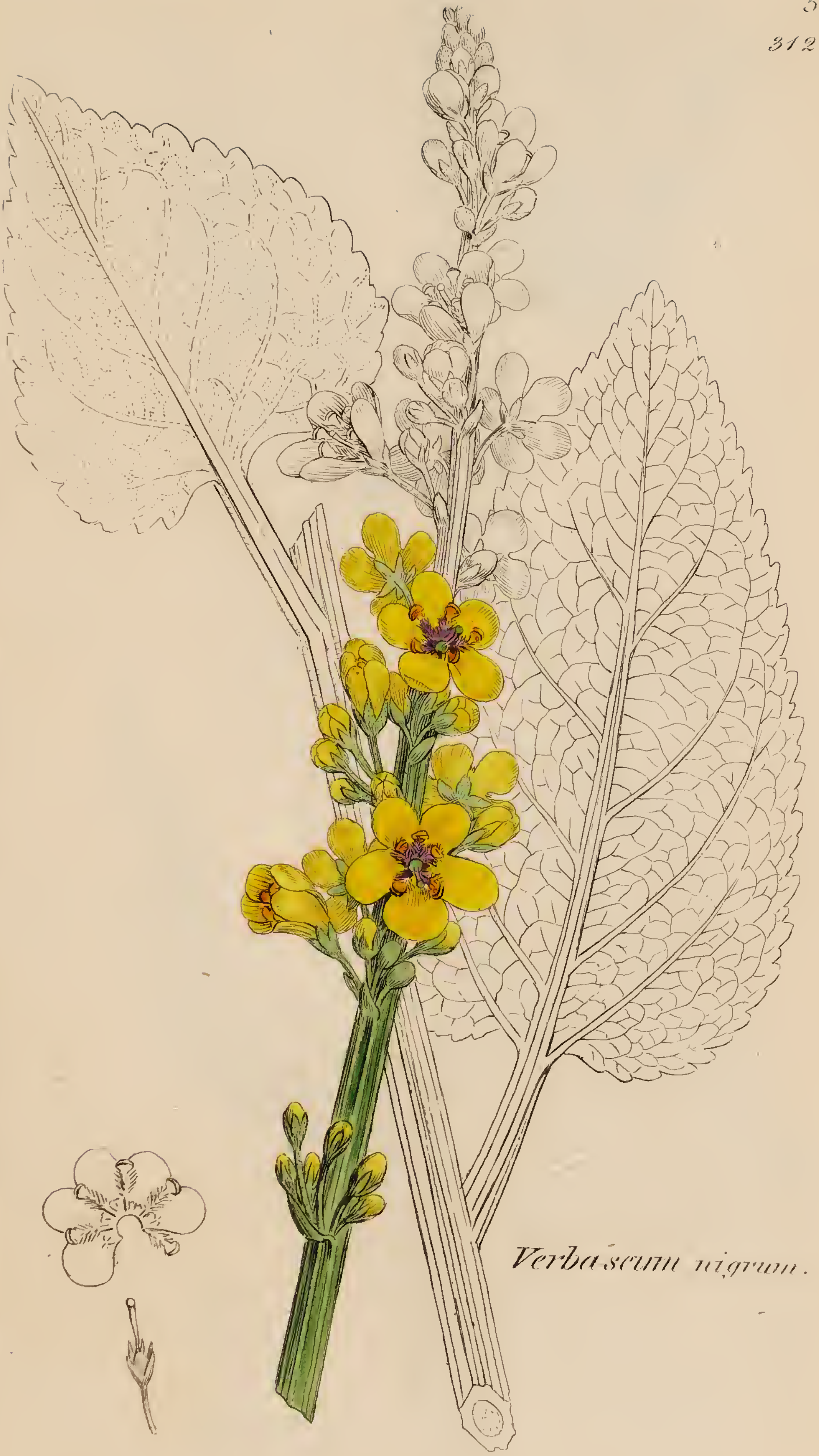
Jany 1 1798 Published by Js. Sowerby London

2598.



Sept.r 1st 1829

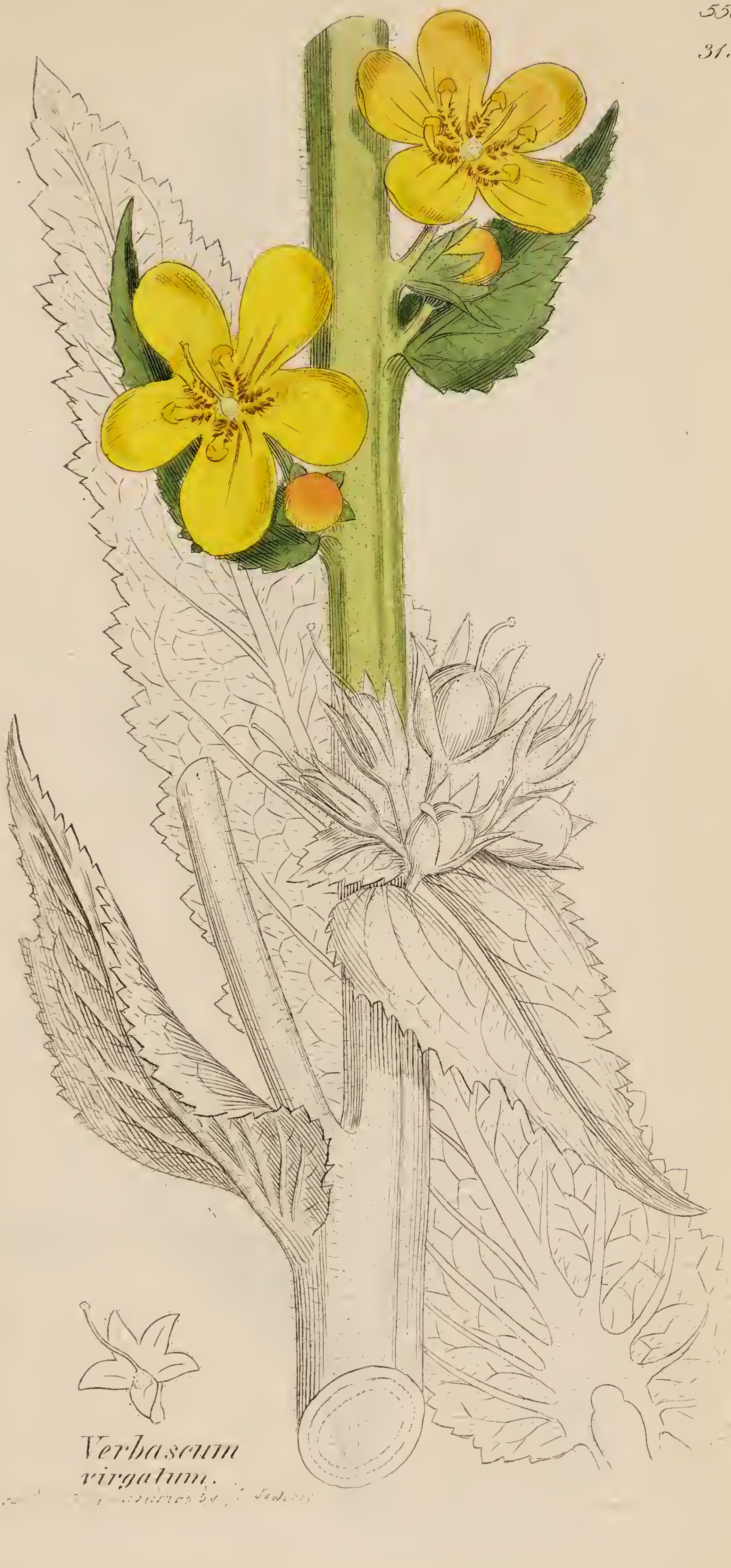
59
312.



Verbascum nigrum.

550.

313.

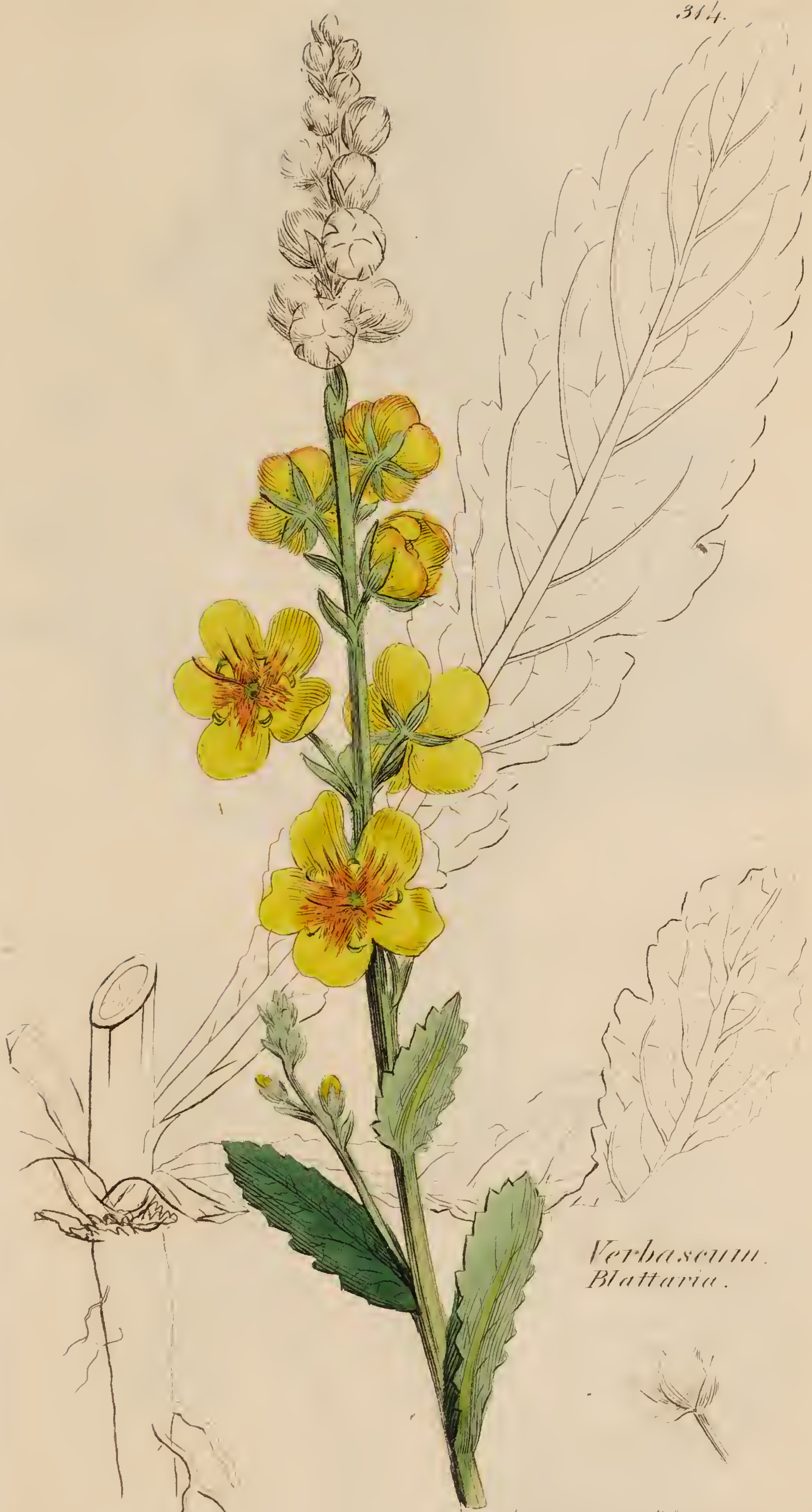


Verbascum virgatum.

[illegible] engraved by J. Sowerby

39.

314.

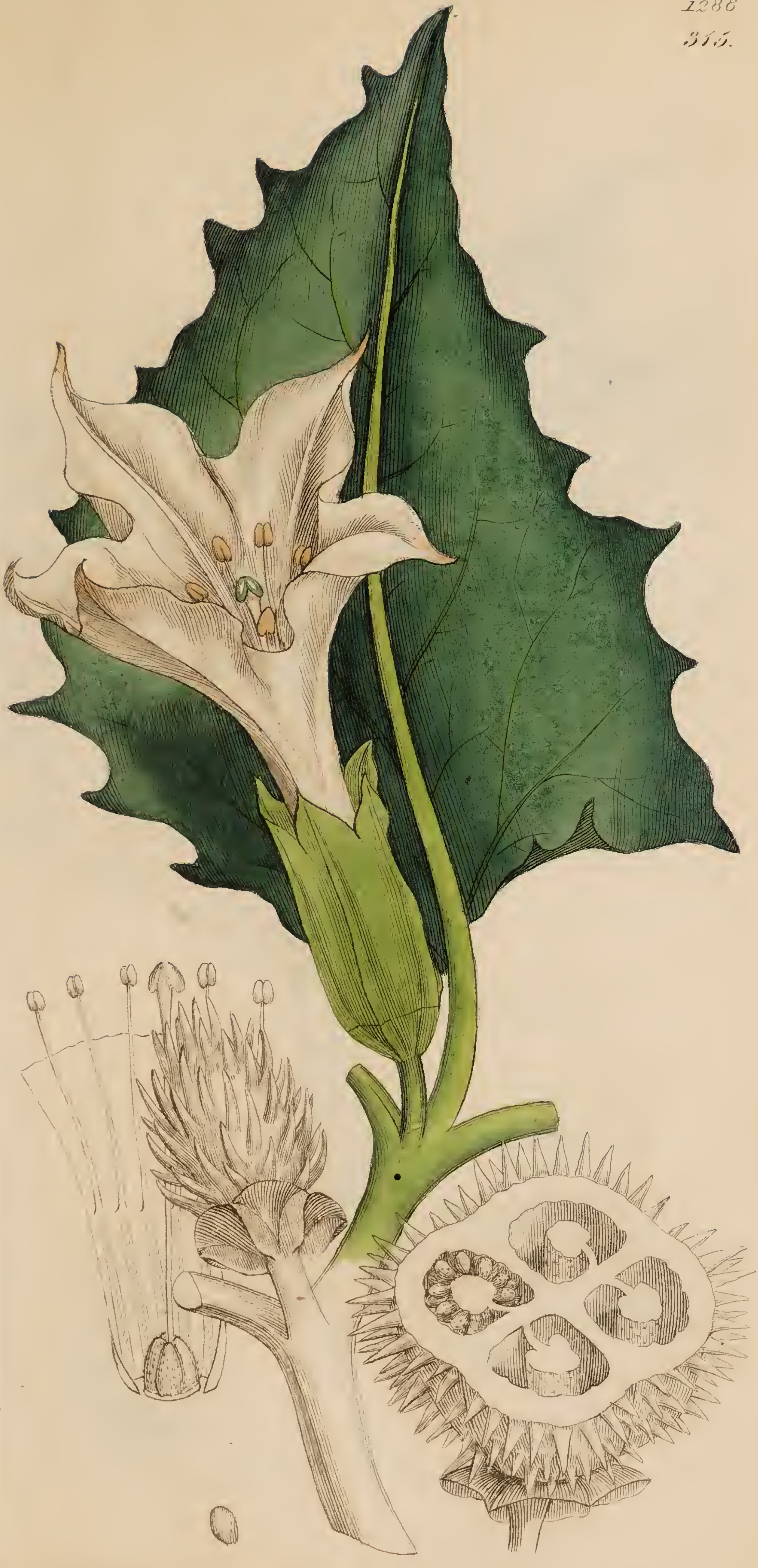


Verbascum.
Blattaria.

May 1st 1797 Published by Js Sowerby London

1288

315.

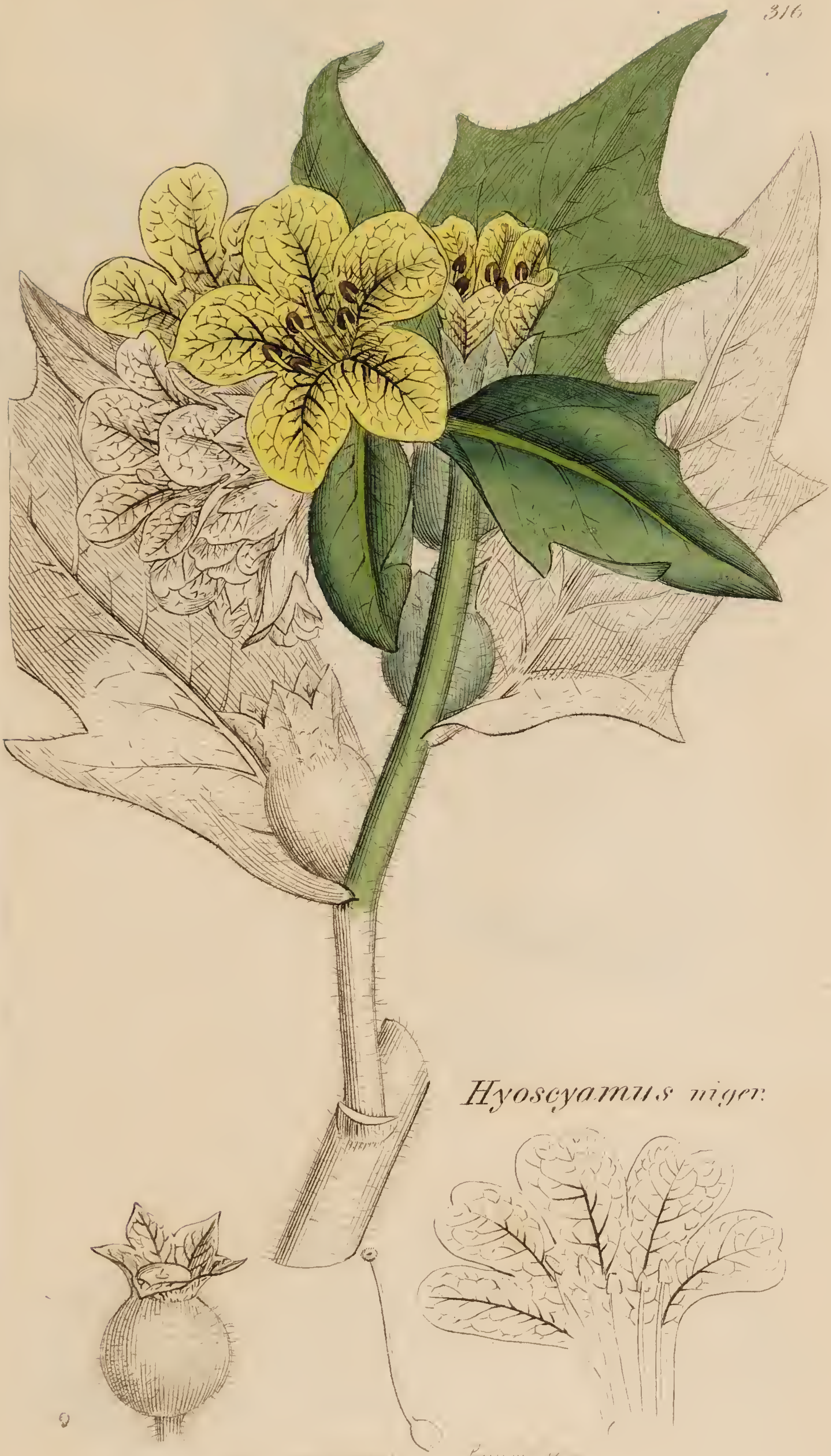


Datura Stramonium.

March 1 1804. Published by Ja^s Sowerby London

591.

316

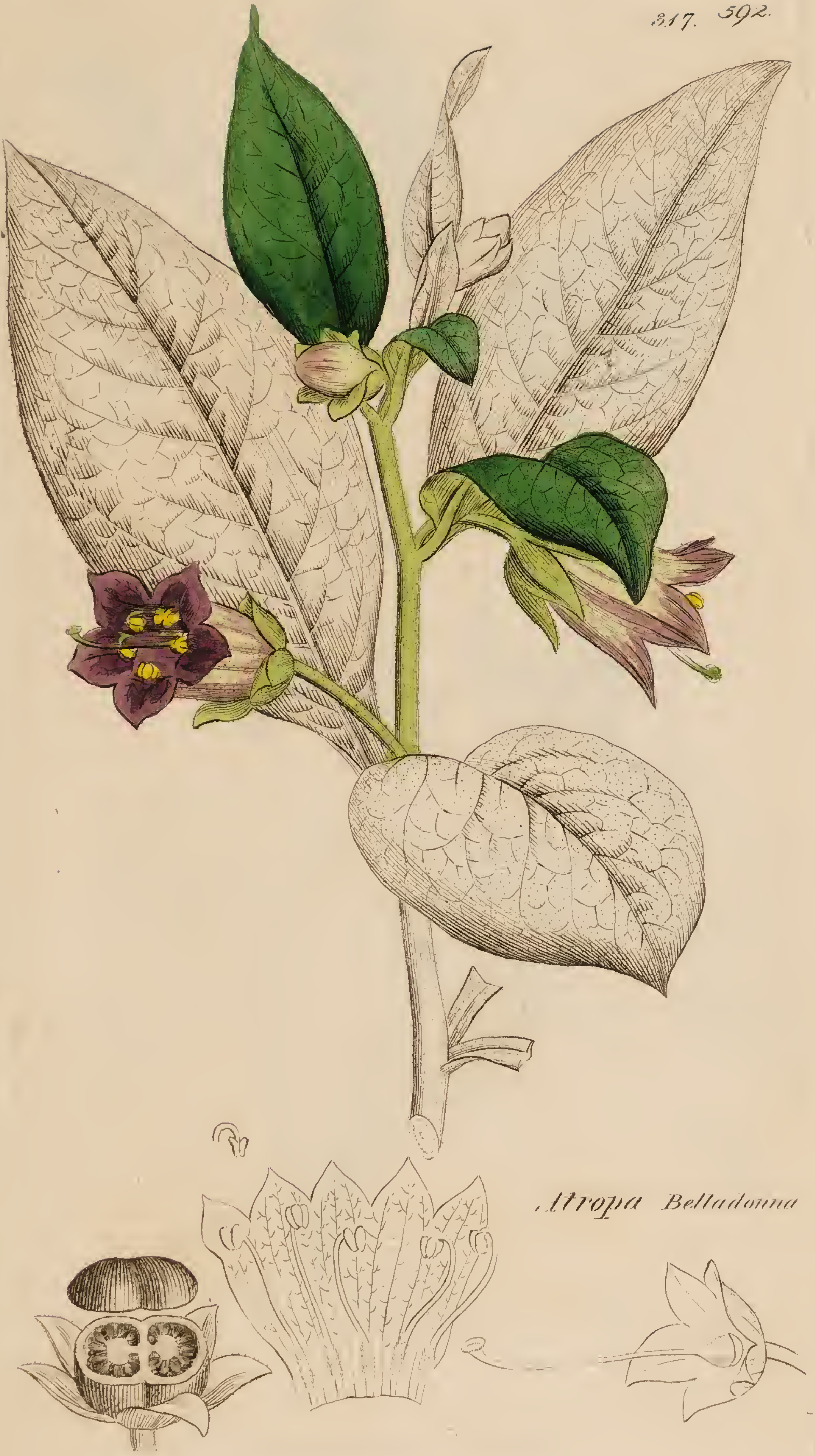


Hyoscyamus niger.

[illegible] 1 179[illegible] [illegible]

[illegible]

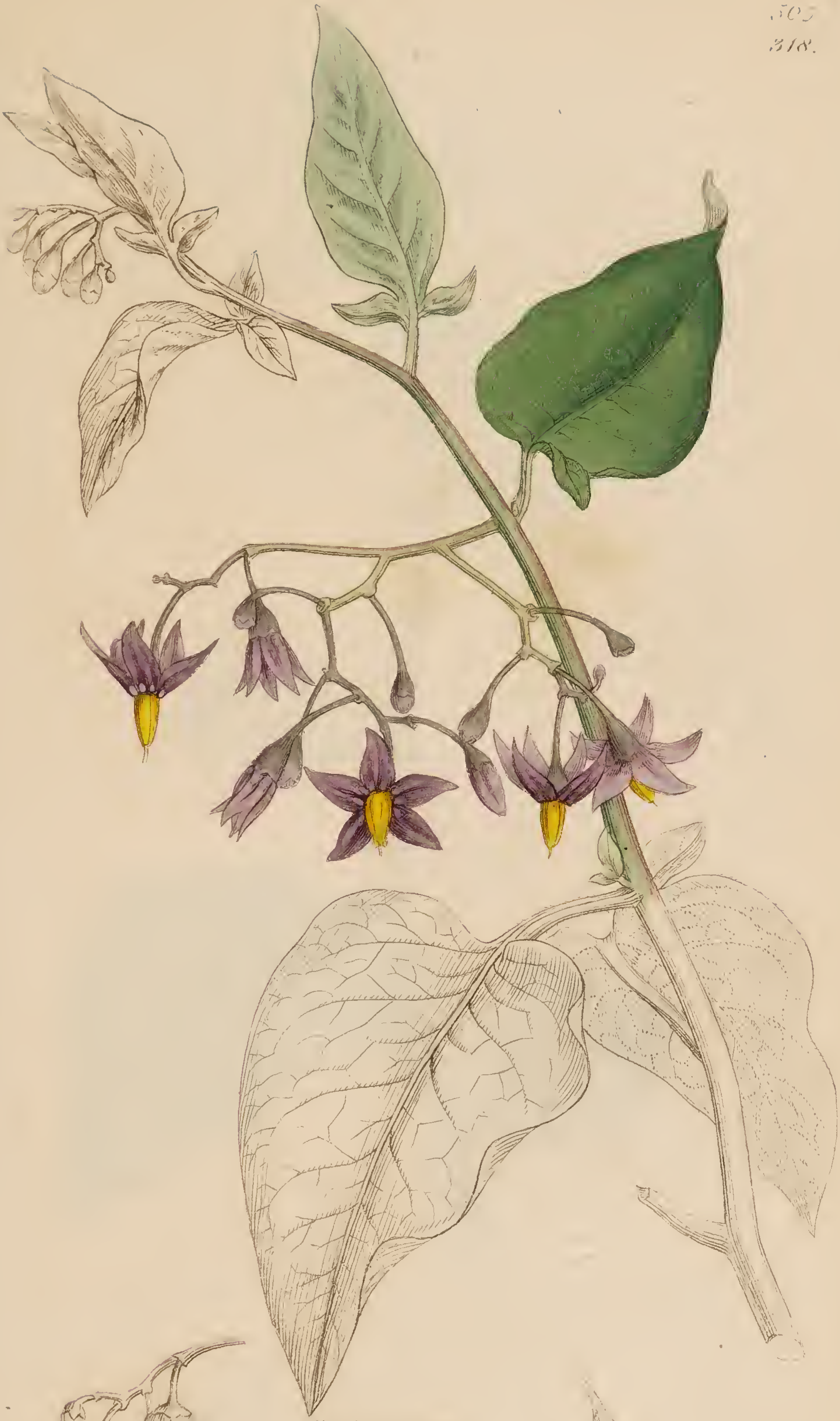
317. 592.



Atropa Belladonna

505

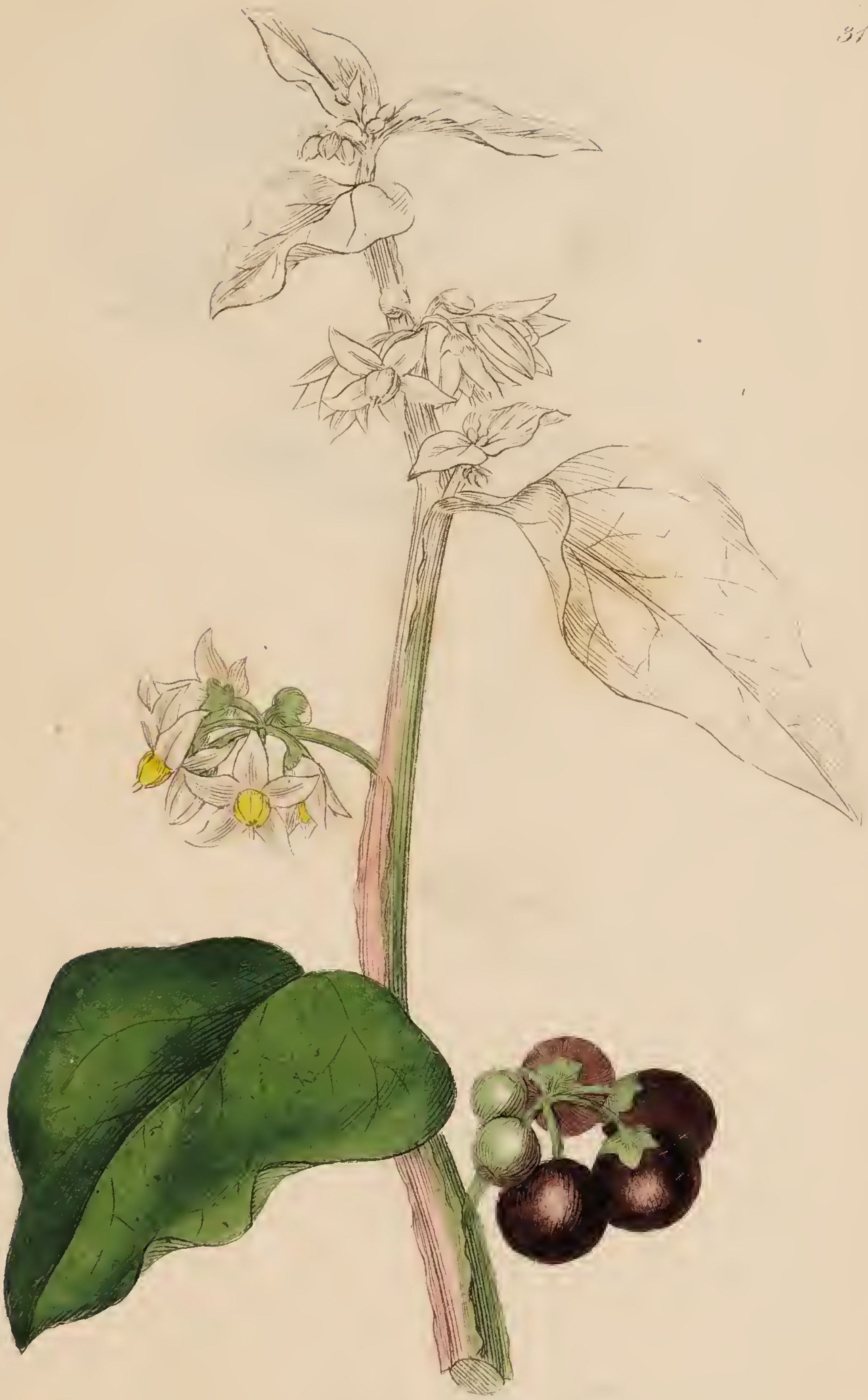
318.



Solanum
Dulcamara.

566

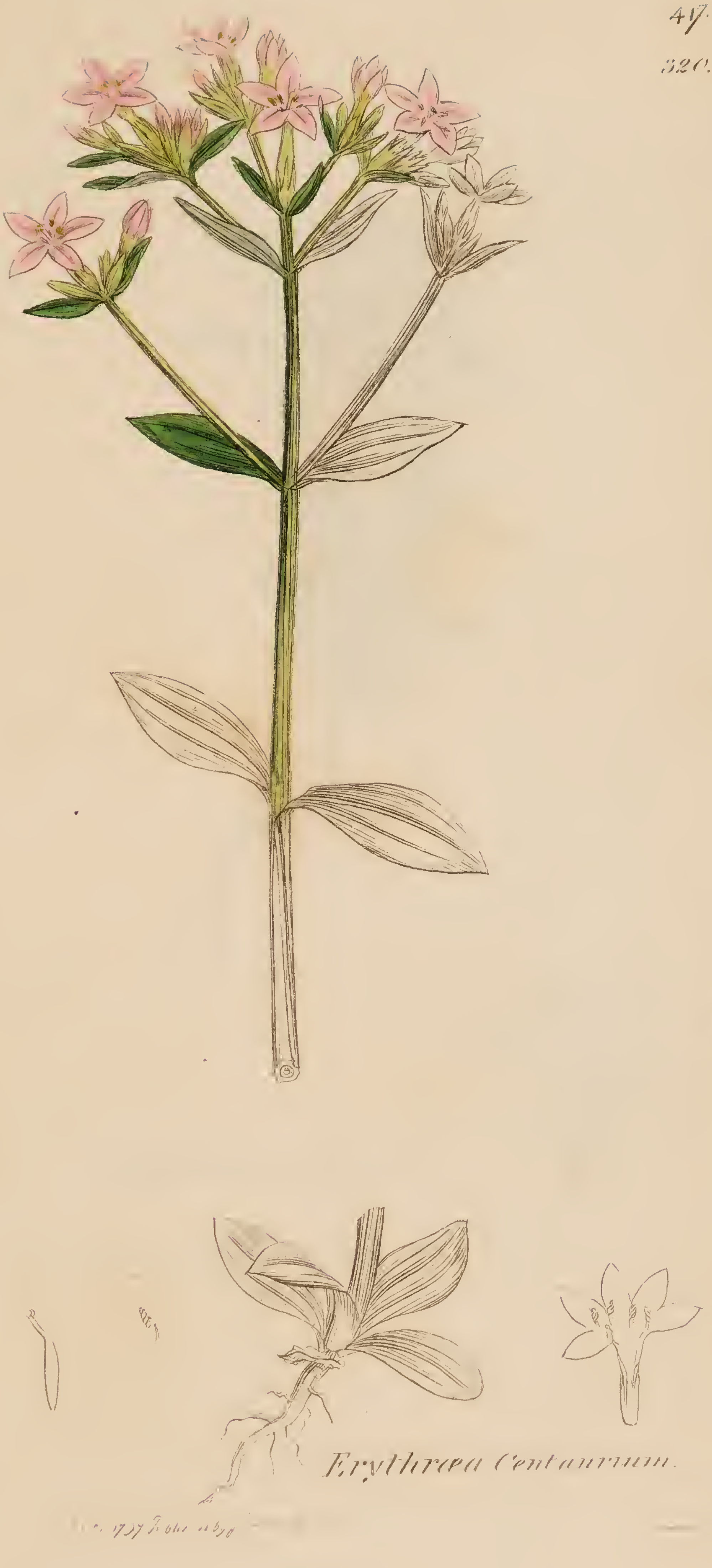
319



Solanum nigrum

417.

320.

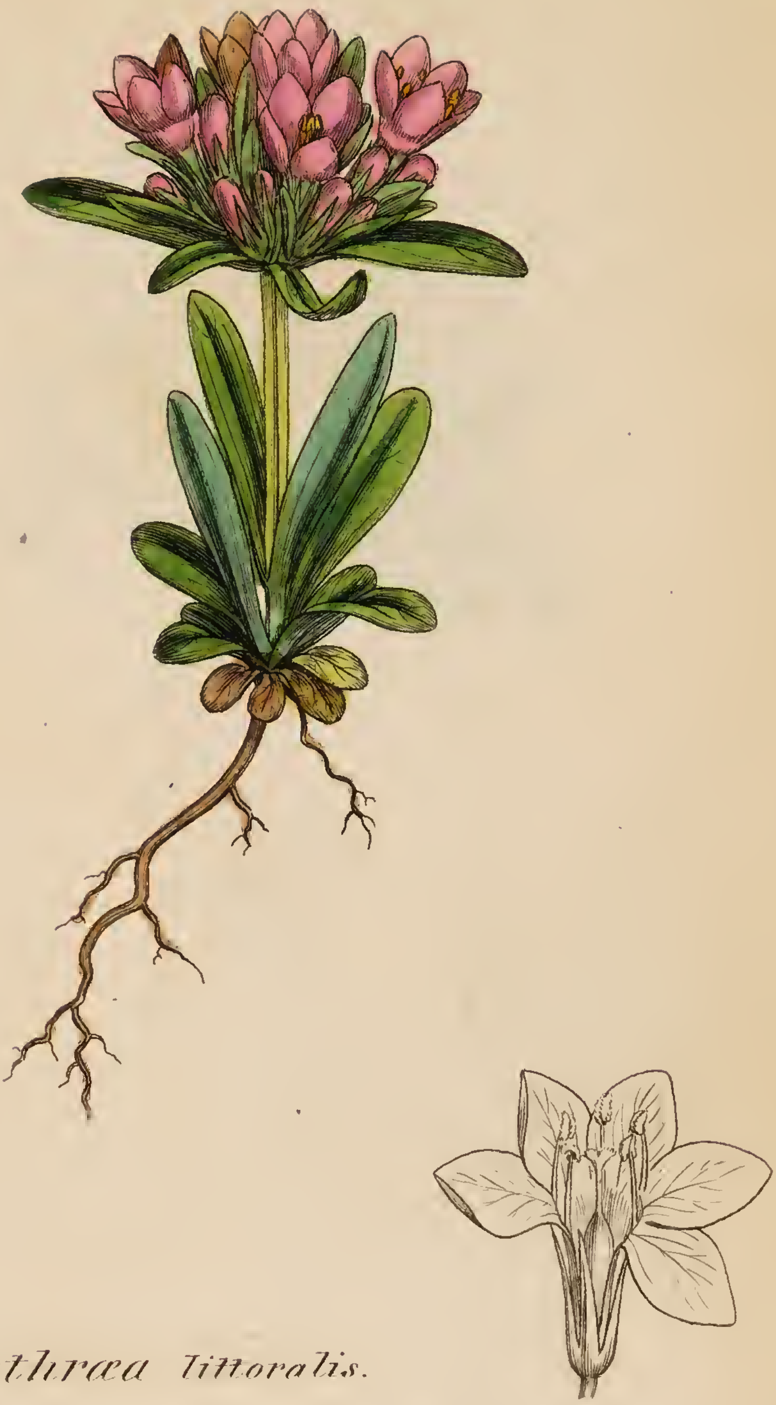


Erythraea Centaurium.

[illegible] 1797 [illegible]

2305

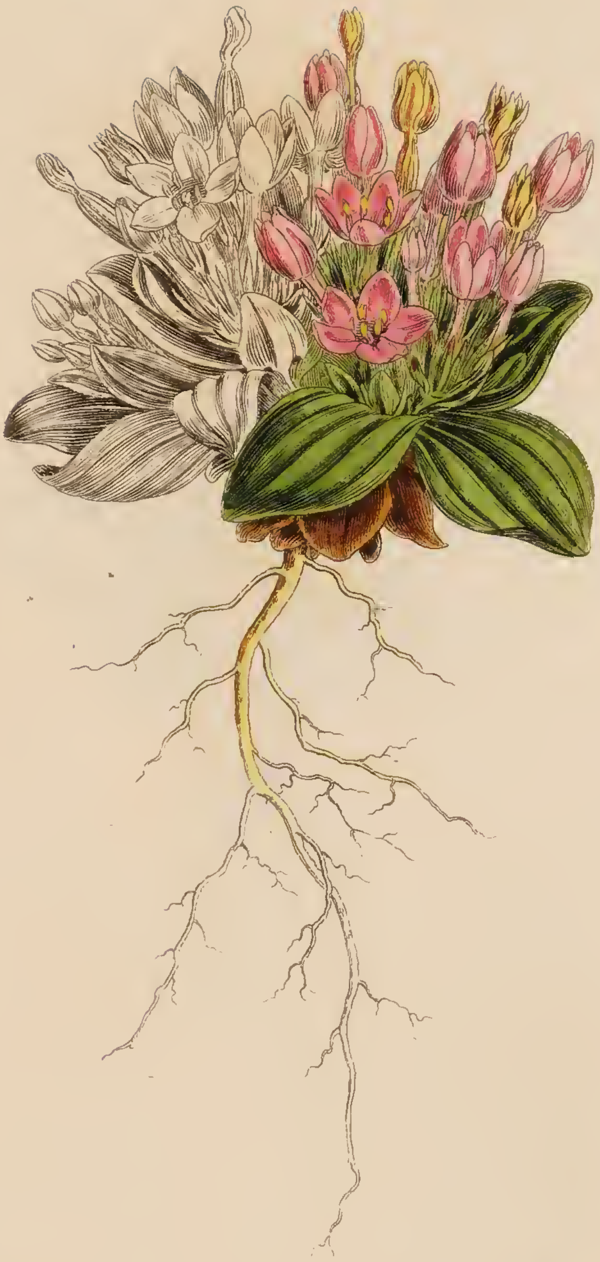
321.

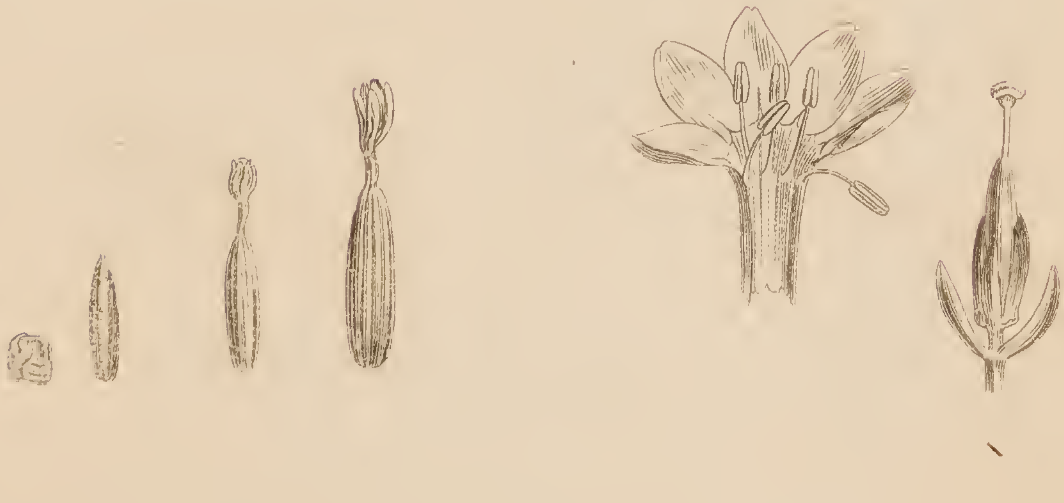


Erythræa littoralis.

[illegible] lished by Jas. Sowerby London

2719.
321*

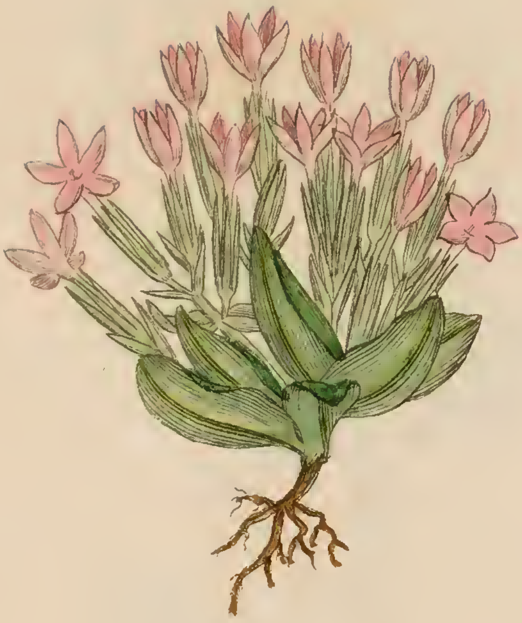




November 1st 1831

458

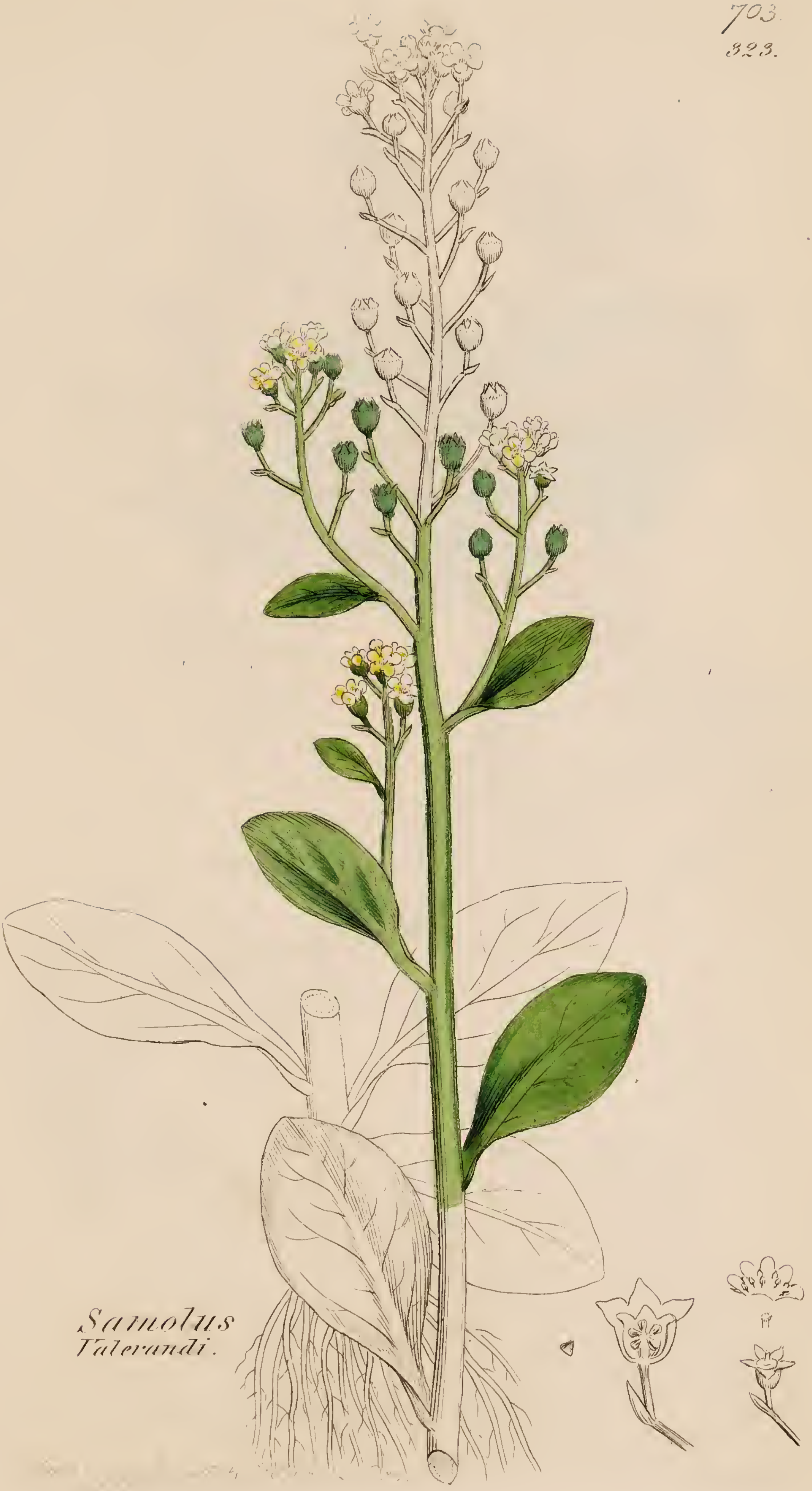
322.



Erythræa pulchella

March 1. 179[illegible] Publish'd by [illegible] London

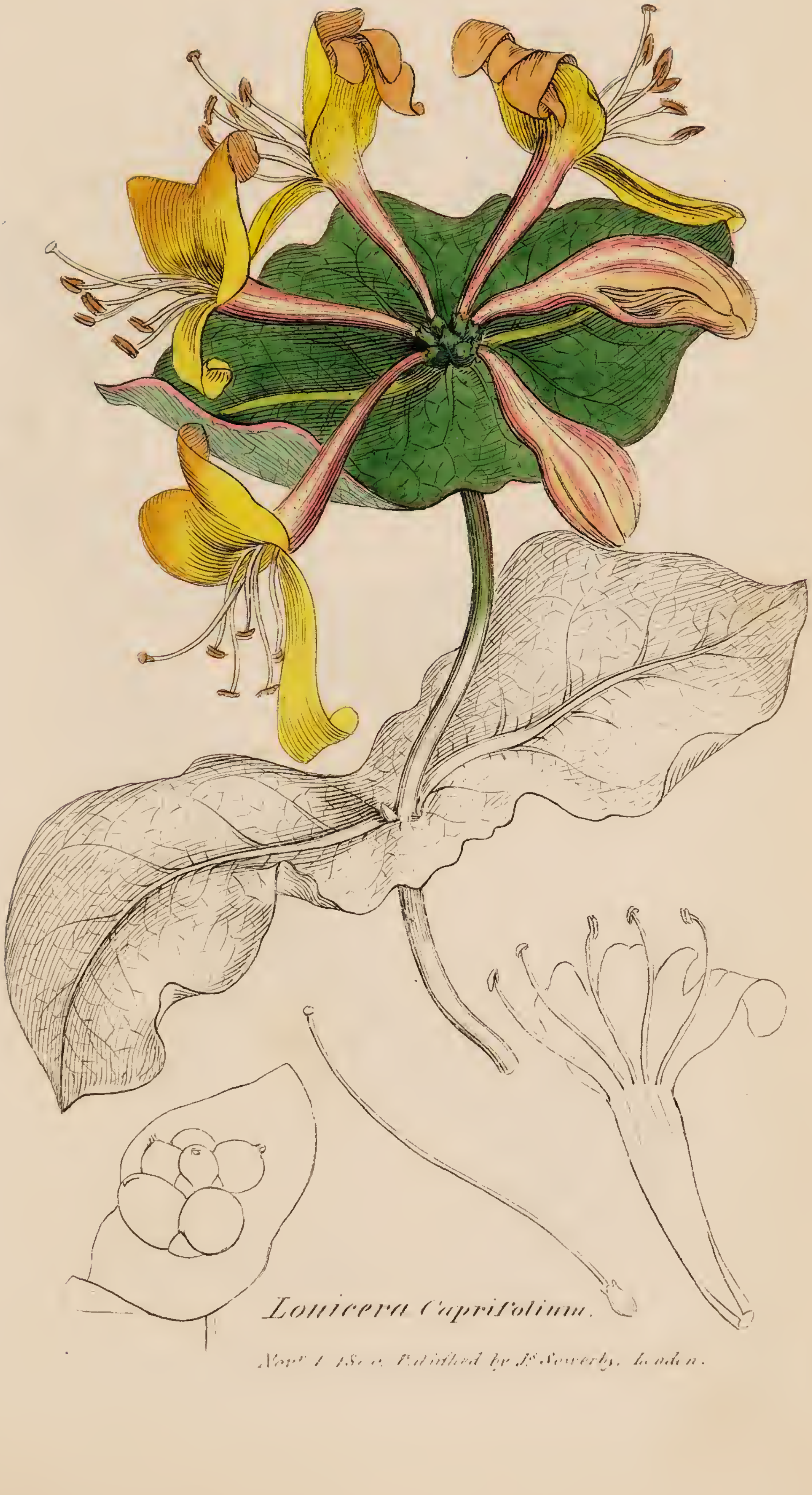
703.
323.



Samolus Valerandi.

799

324.

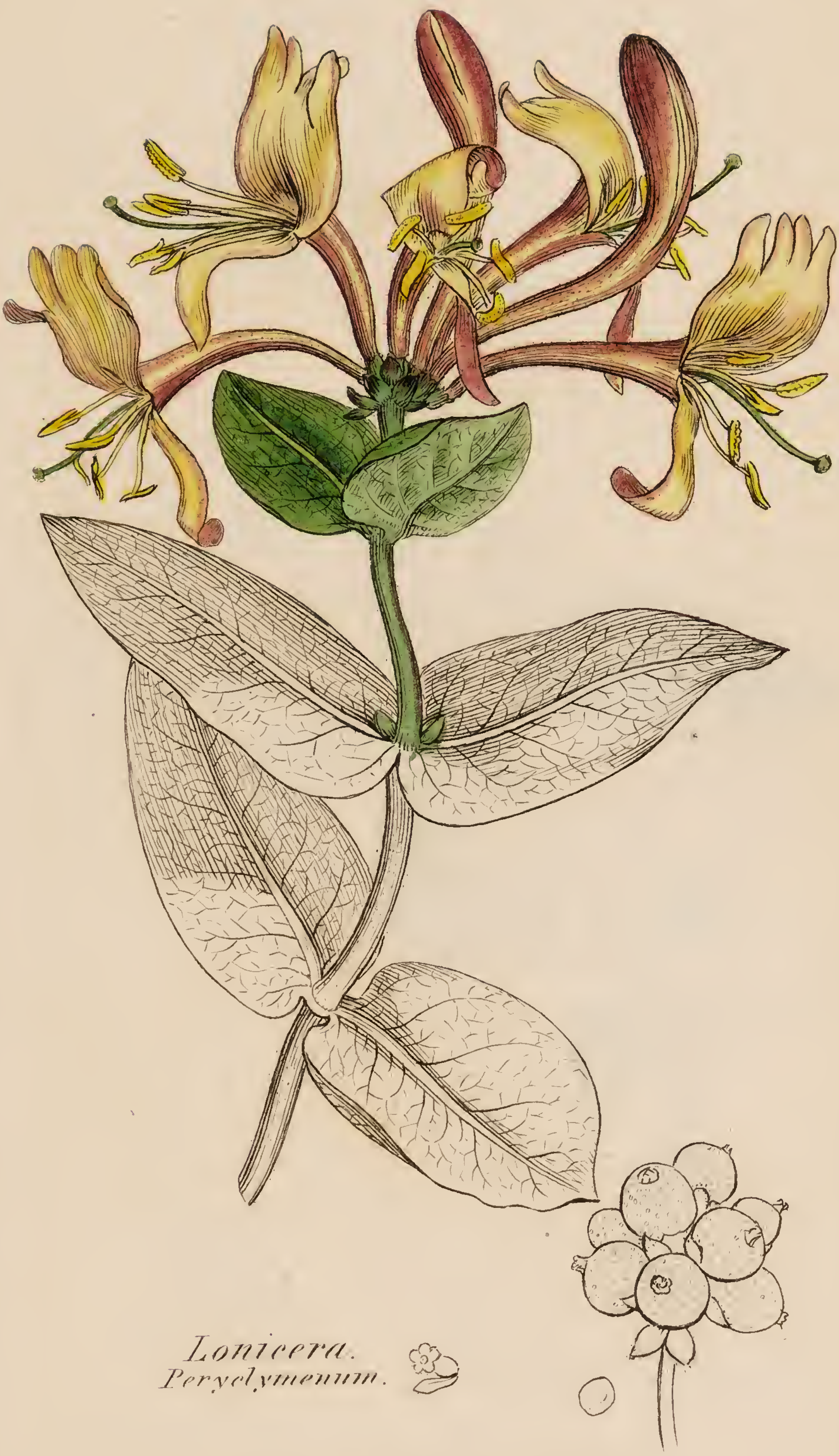


Lonicera Caprifolium.

Novr 1 1800. Published by Js Sowerby. London.

800

325.

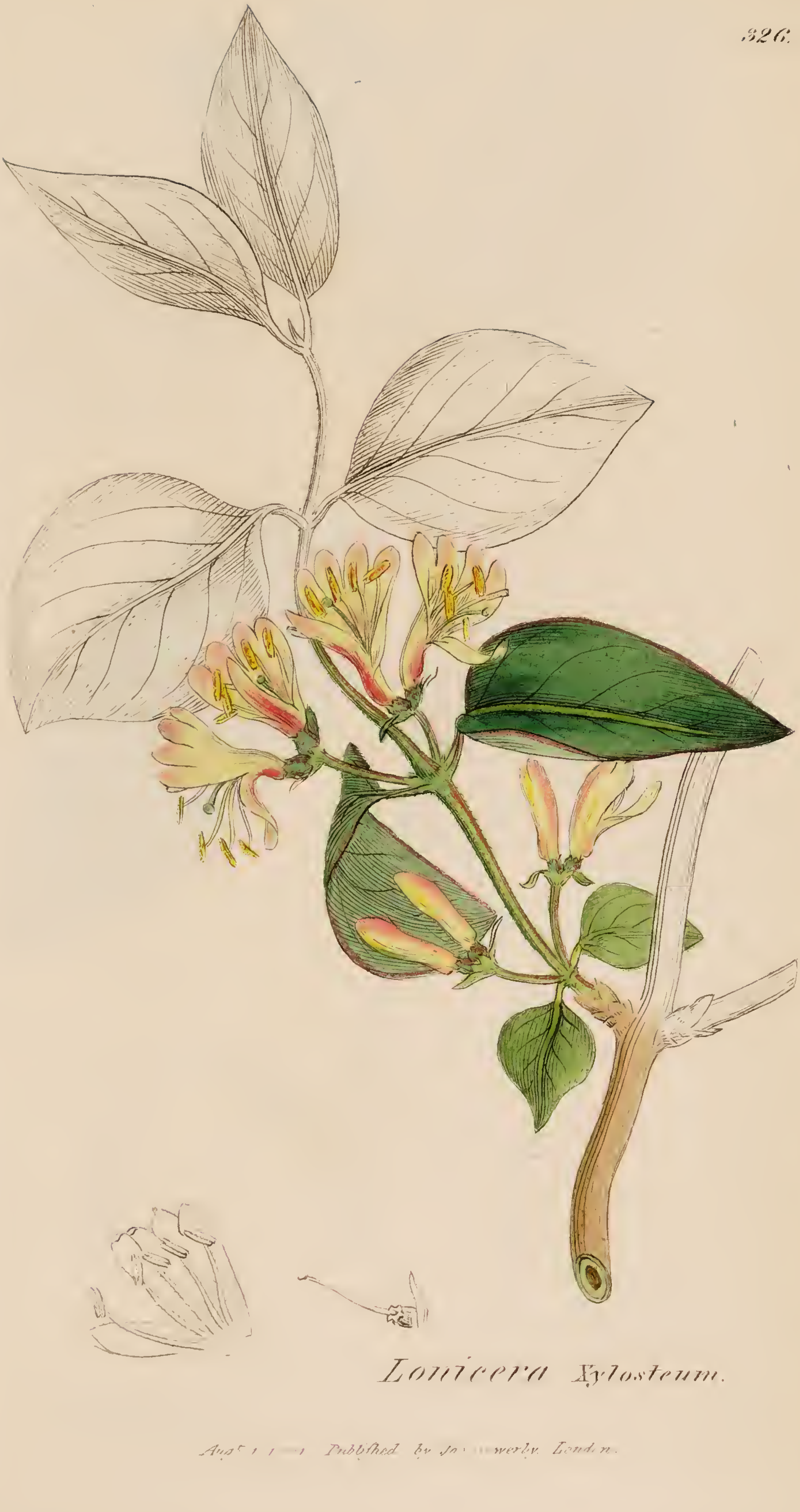


Lonicera.
Peryclymenum.

Novr 1. 1800. Publiſhed by Jas Sowerby London.

916

326.

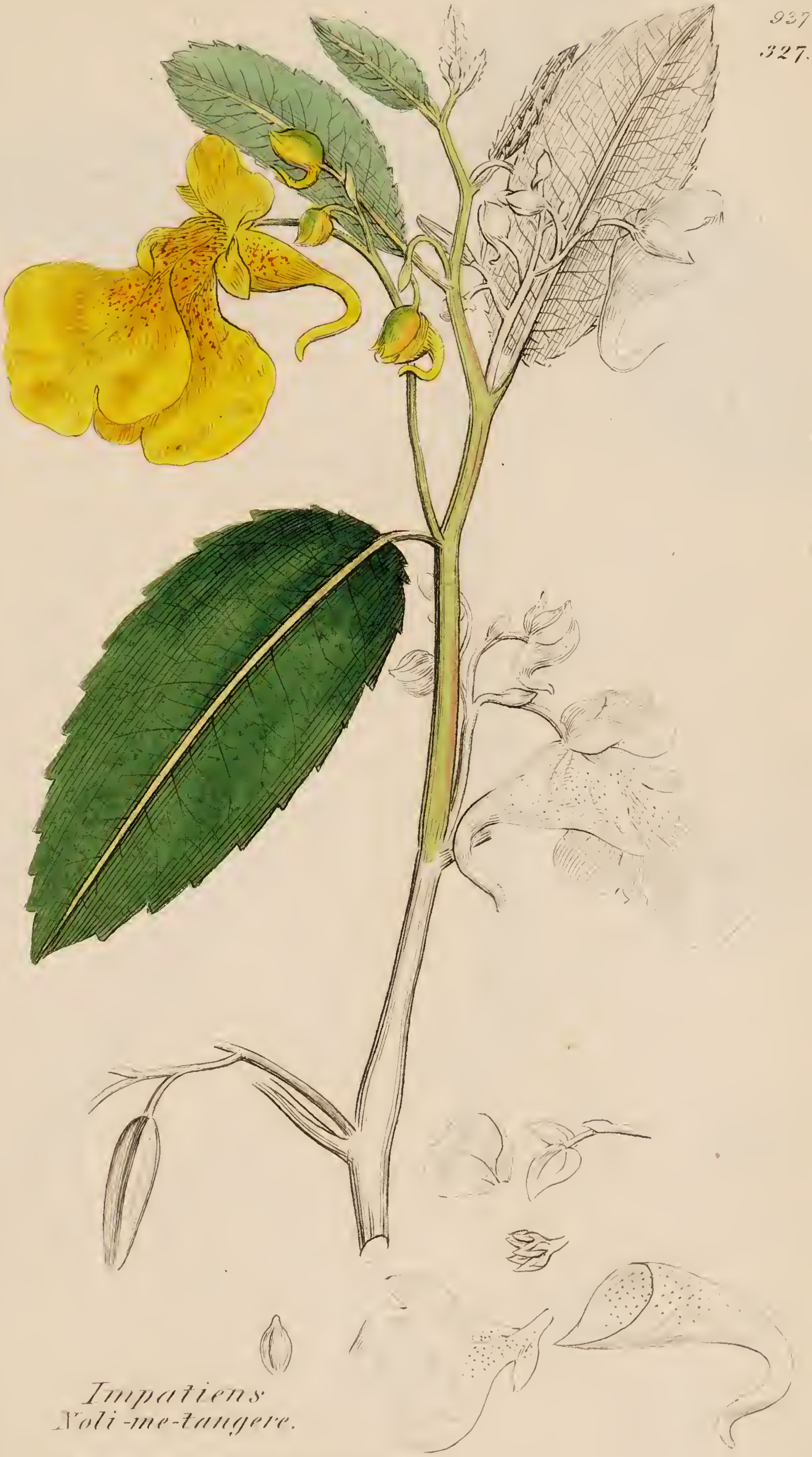


Lonicera Xylosteum.

Augt. 1 [illegible] Published by Jas. Sowerby London.

937

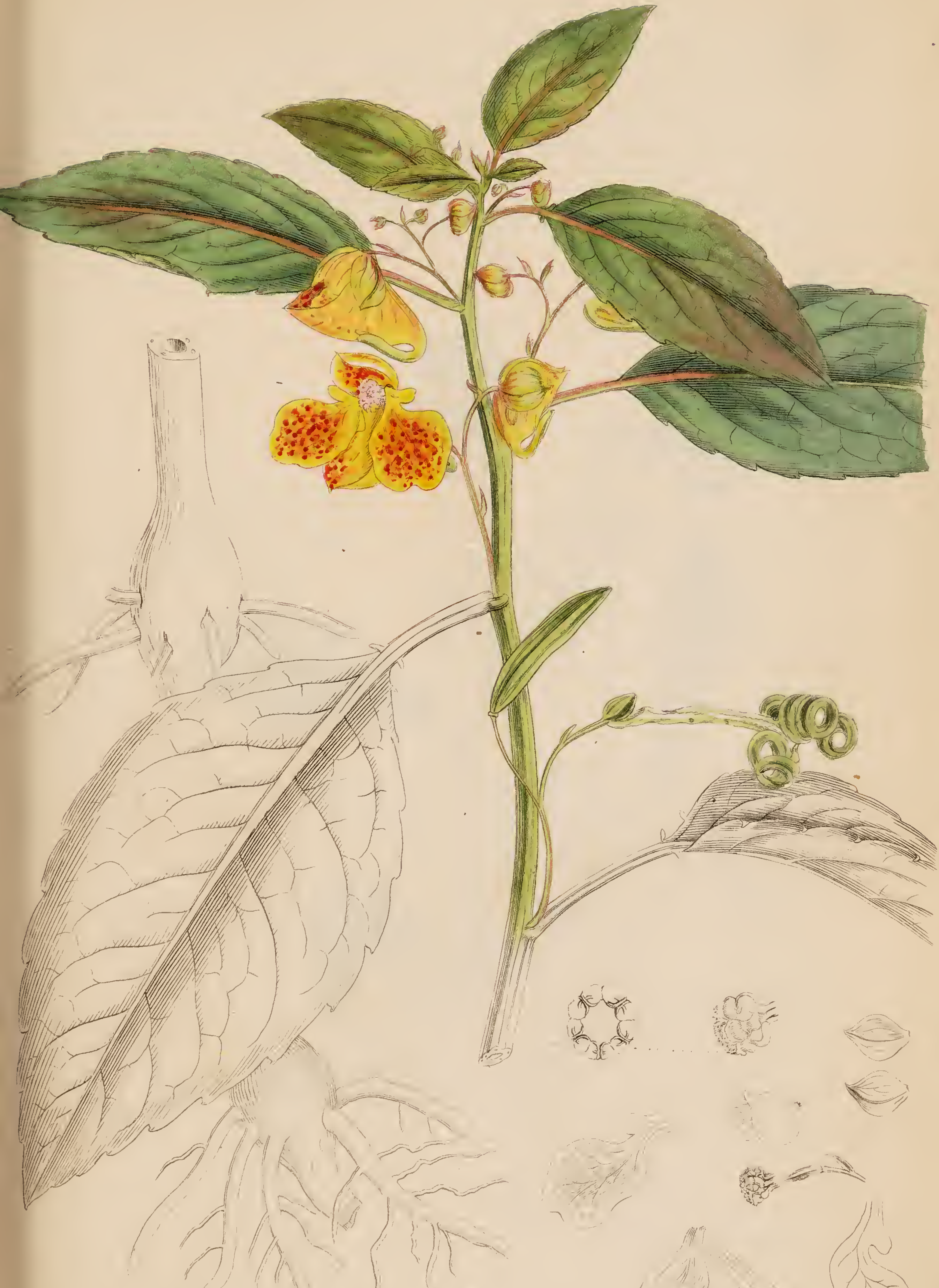
327.



Impatiens
Noli-me-tangere.

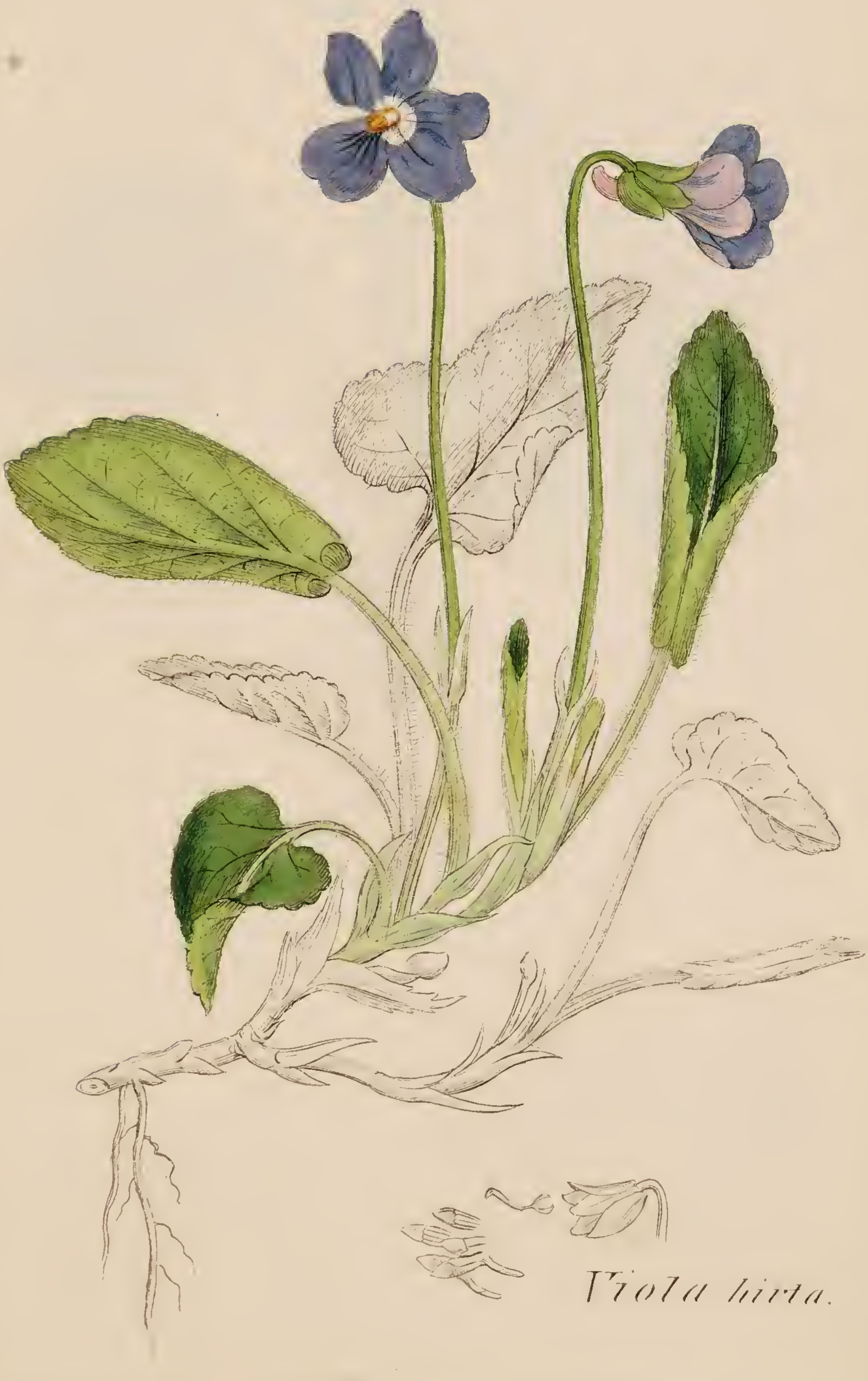
[illegible] 1 18[illegible] Publiſhed by Jaˢ. Sowerby. London.

2794.
327*



Jany 1st 1835.

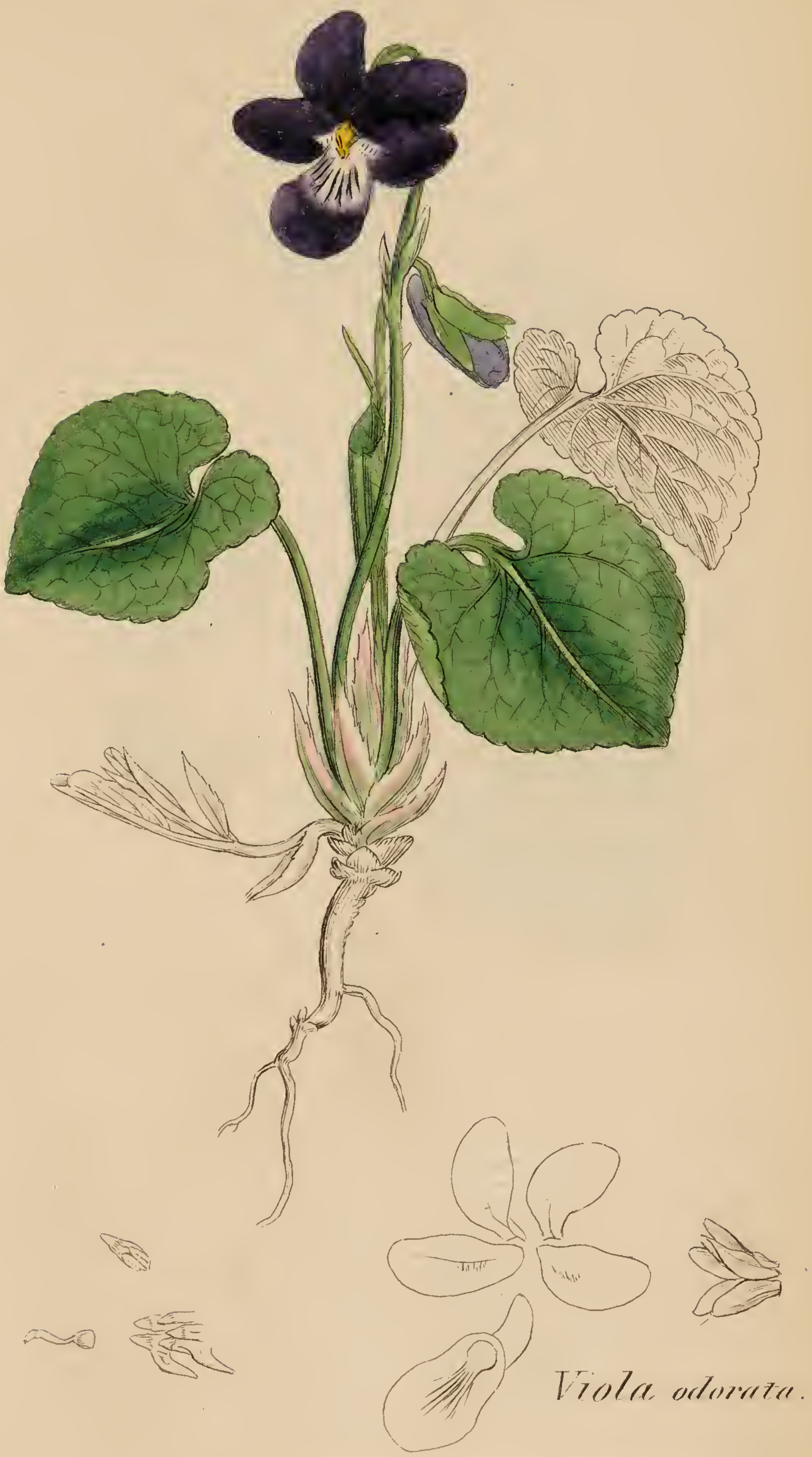
894.
328.



Viola hirta.

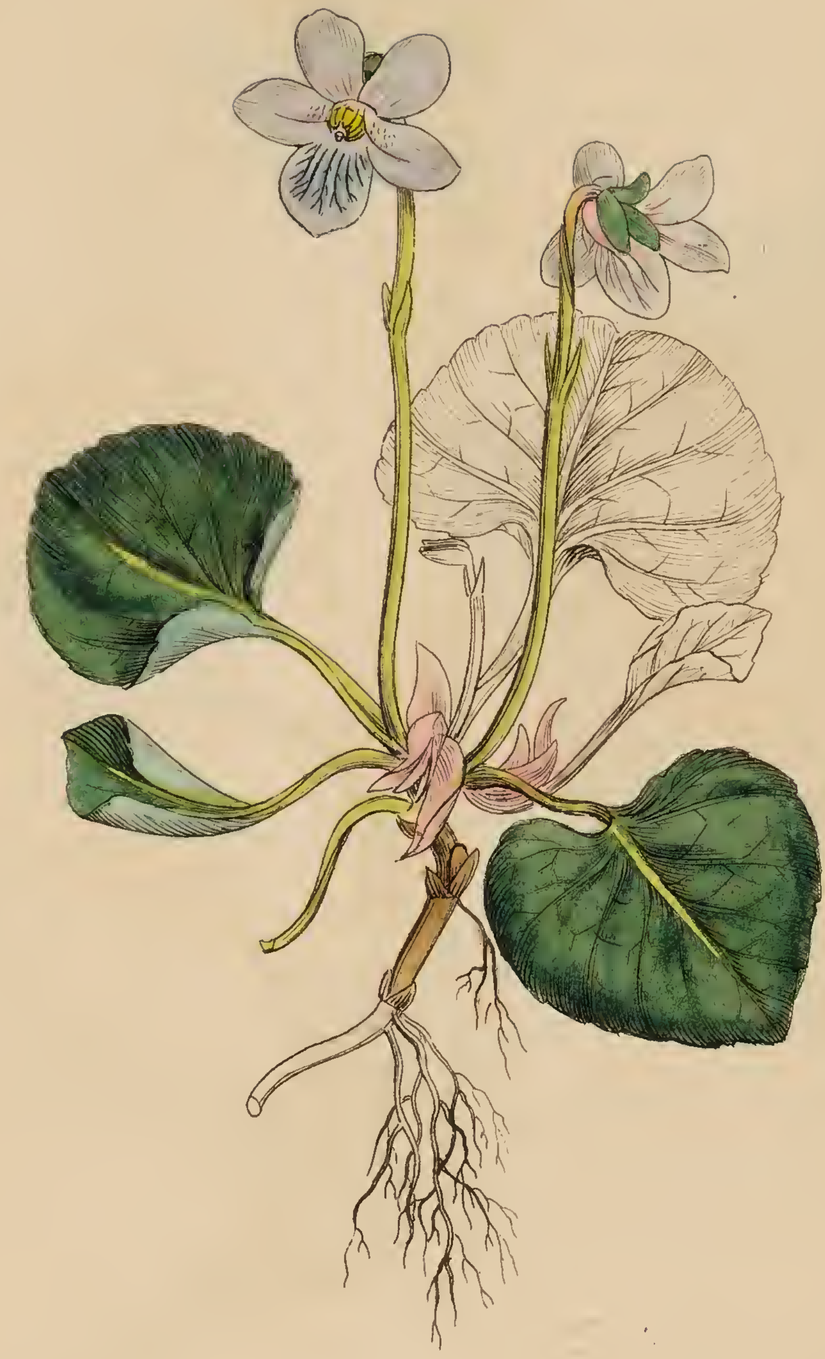
619

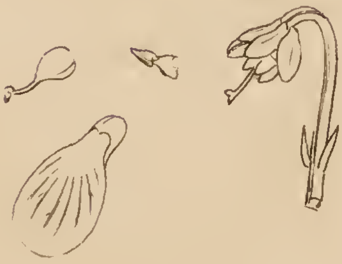
329.



Viola odorata.

[illegible]

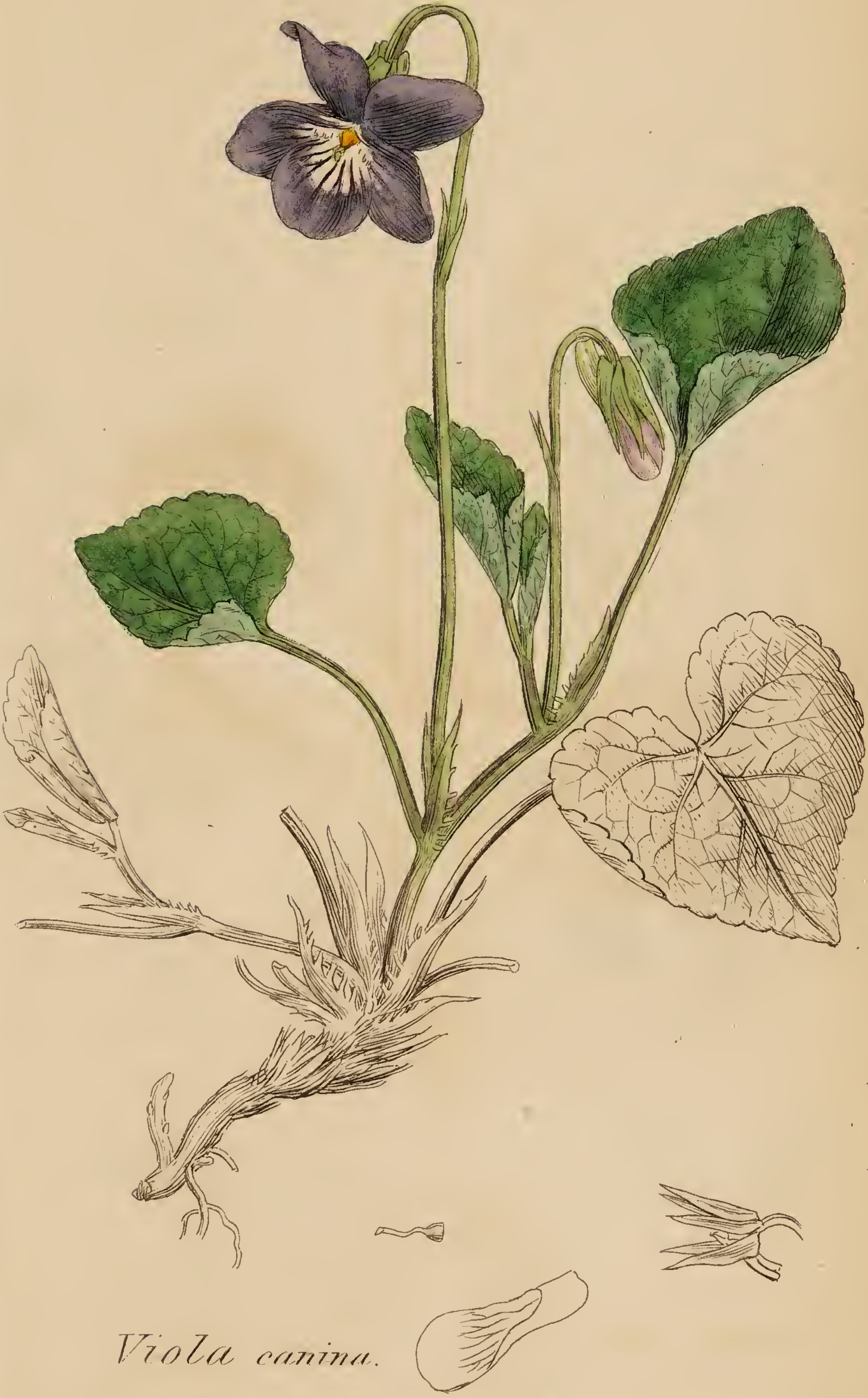




Viola palustris.

620.

331.

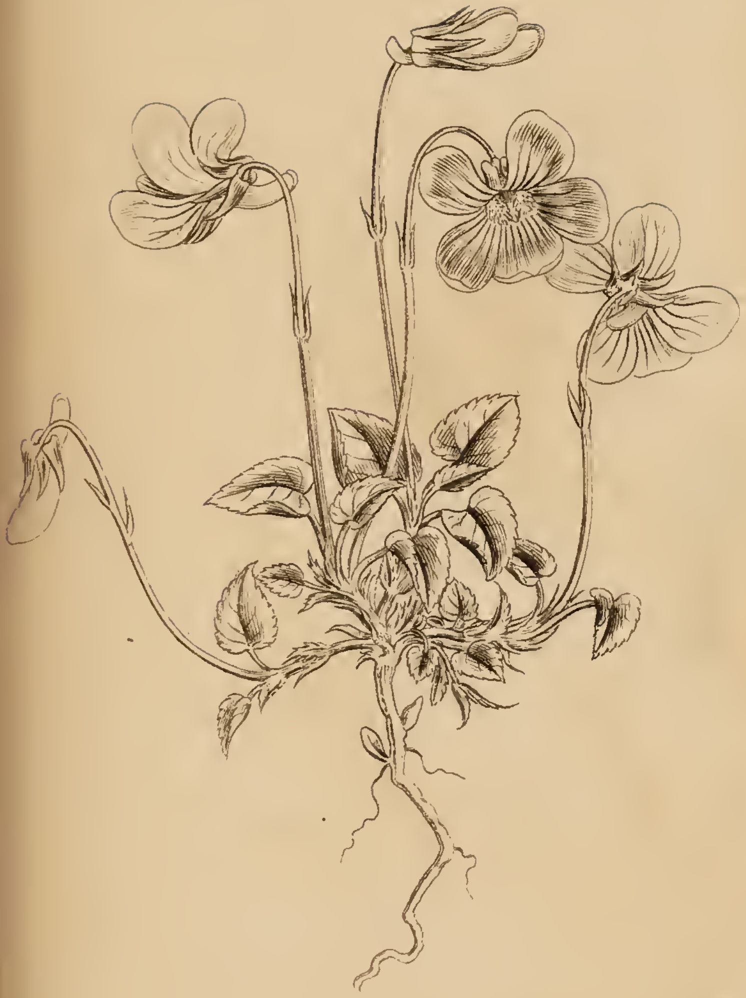


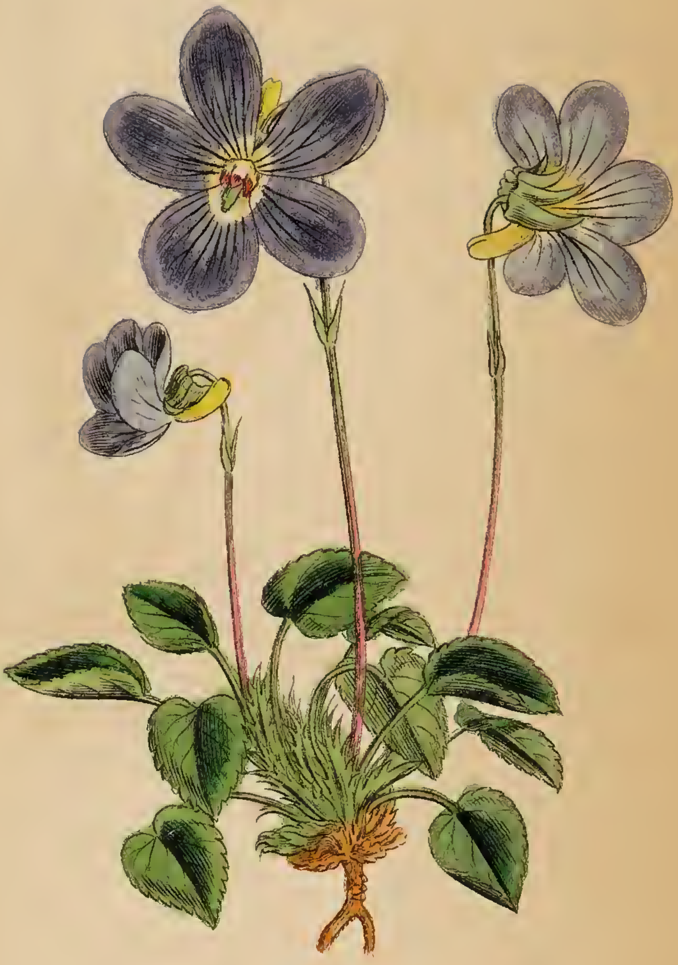
Viola canina.

1.1799. Published by Sowerby London.

2736.

331*

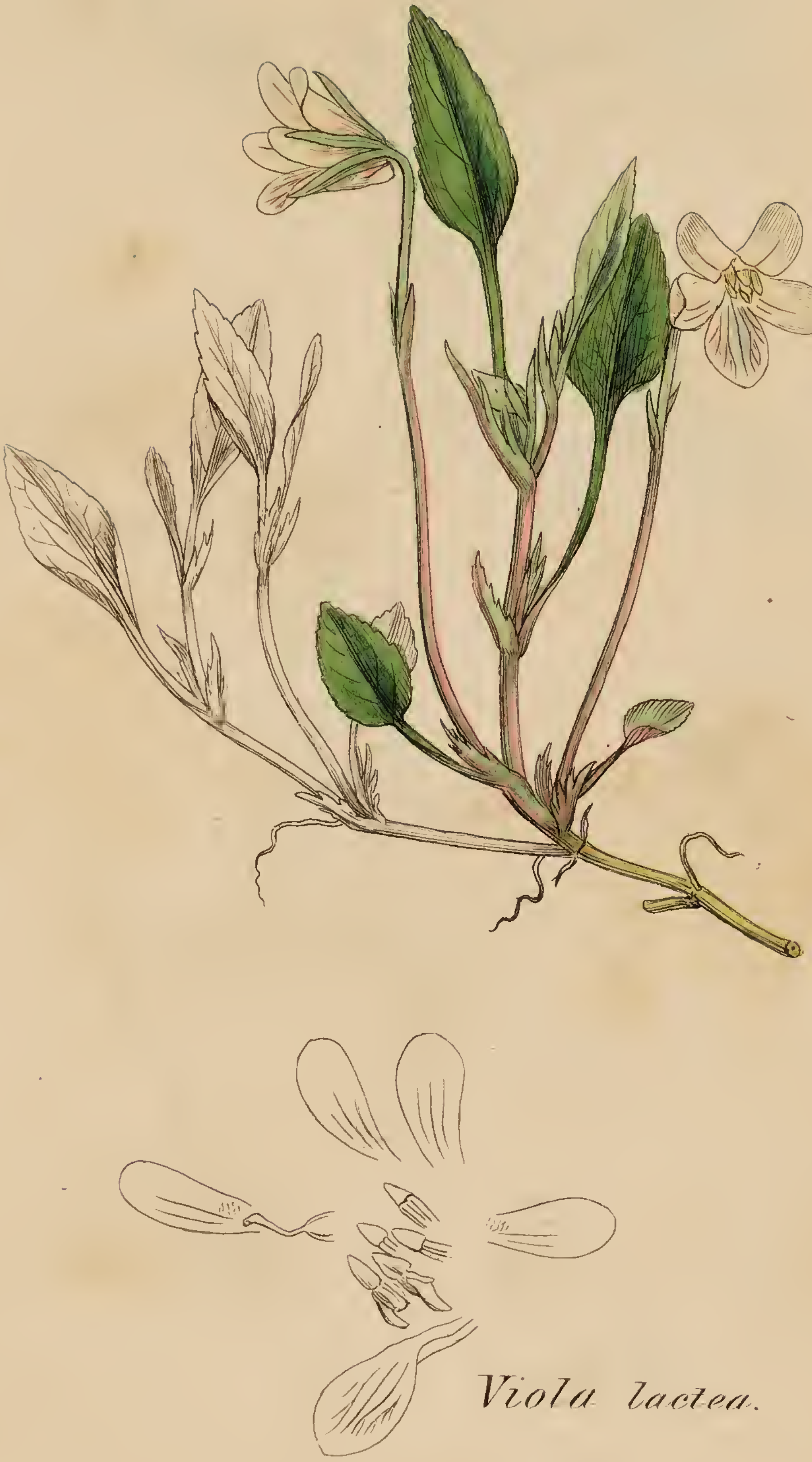




February 1st 1832.

445.

332.

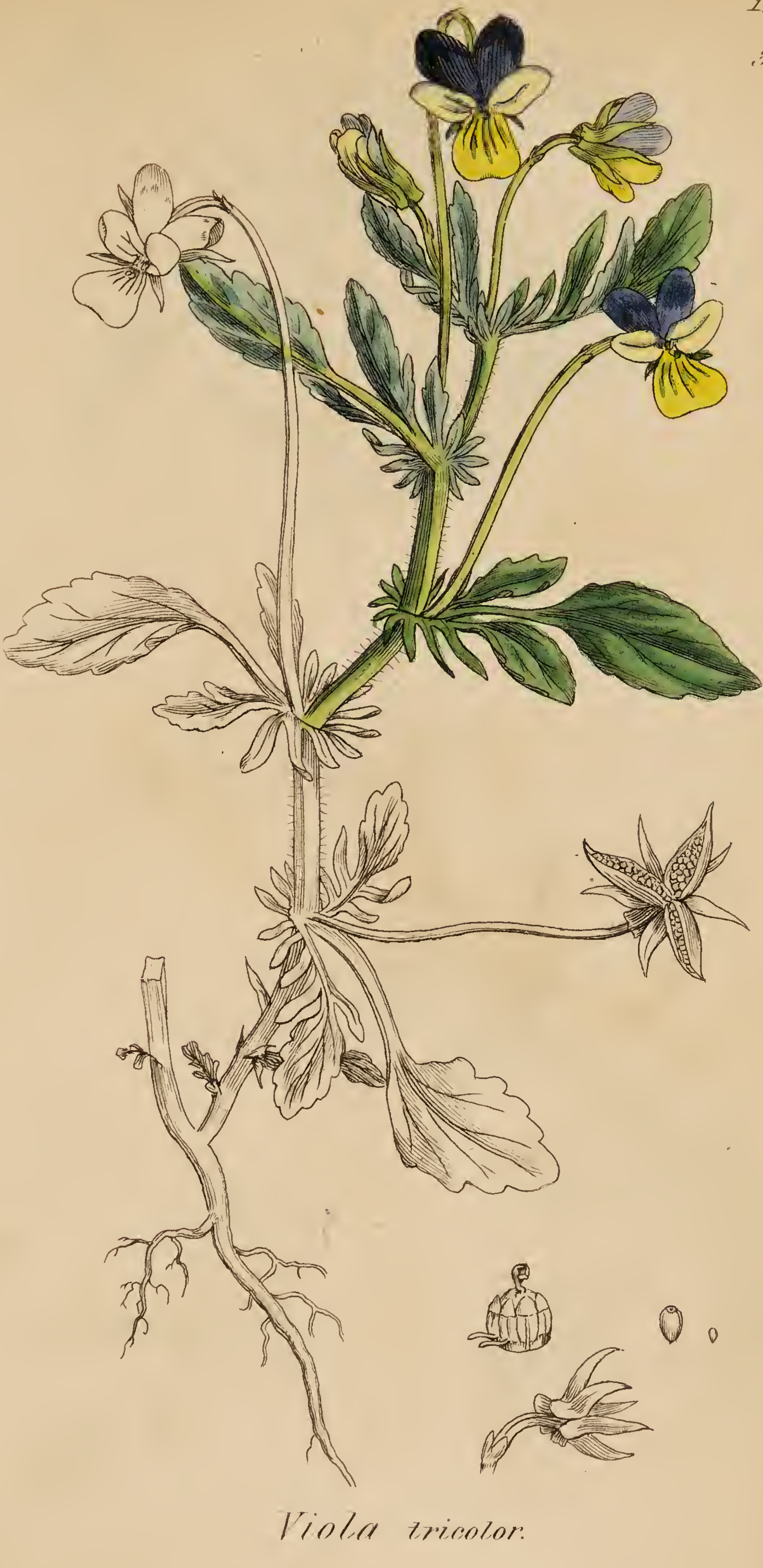


Viola lactea.

1797 Published by J. Sowerby London

1287

333.

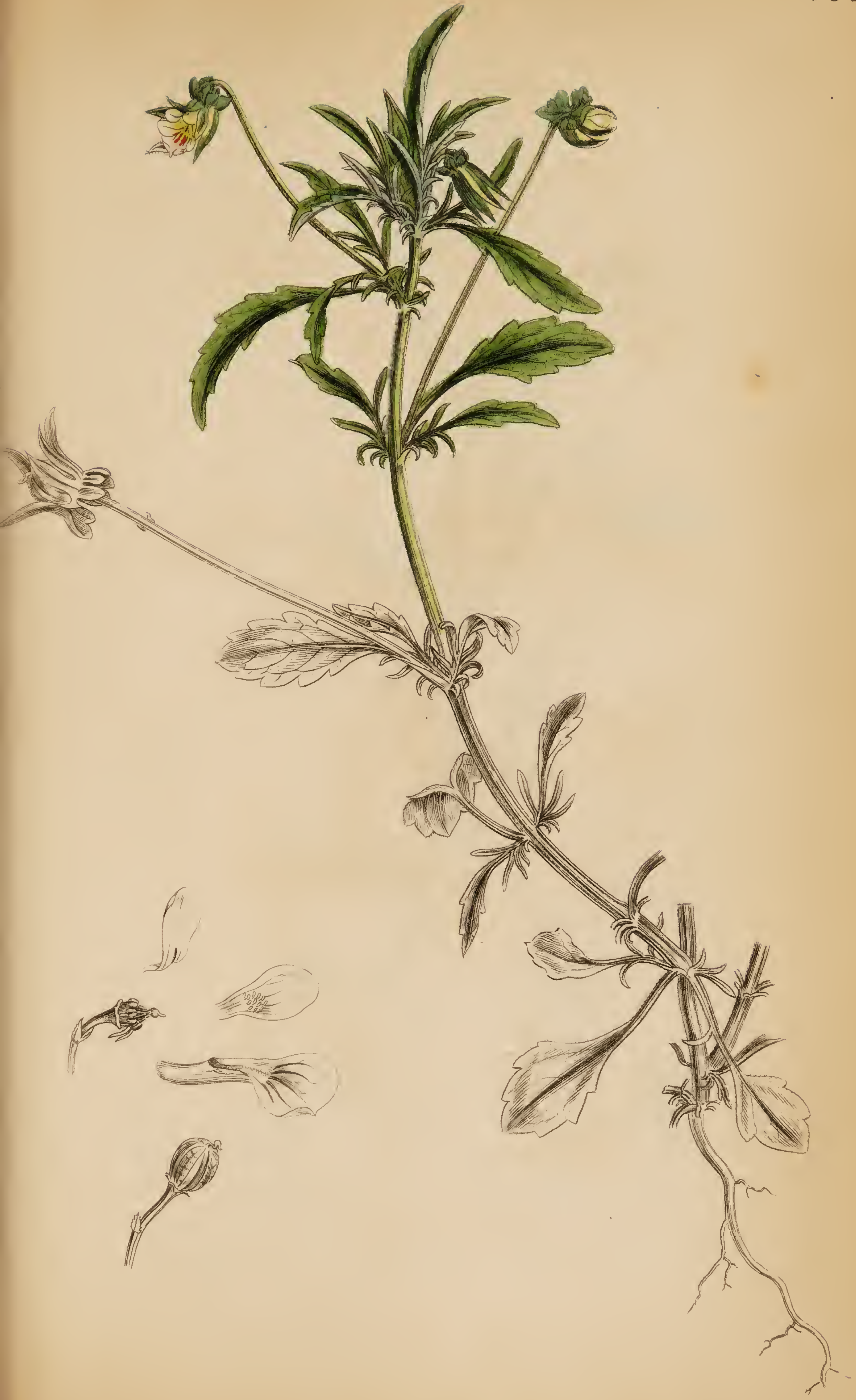


Viola tricolor.

March 1. 1804. Publiſhed by Jas. Sowerby. London.

2712.

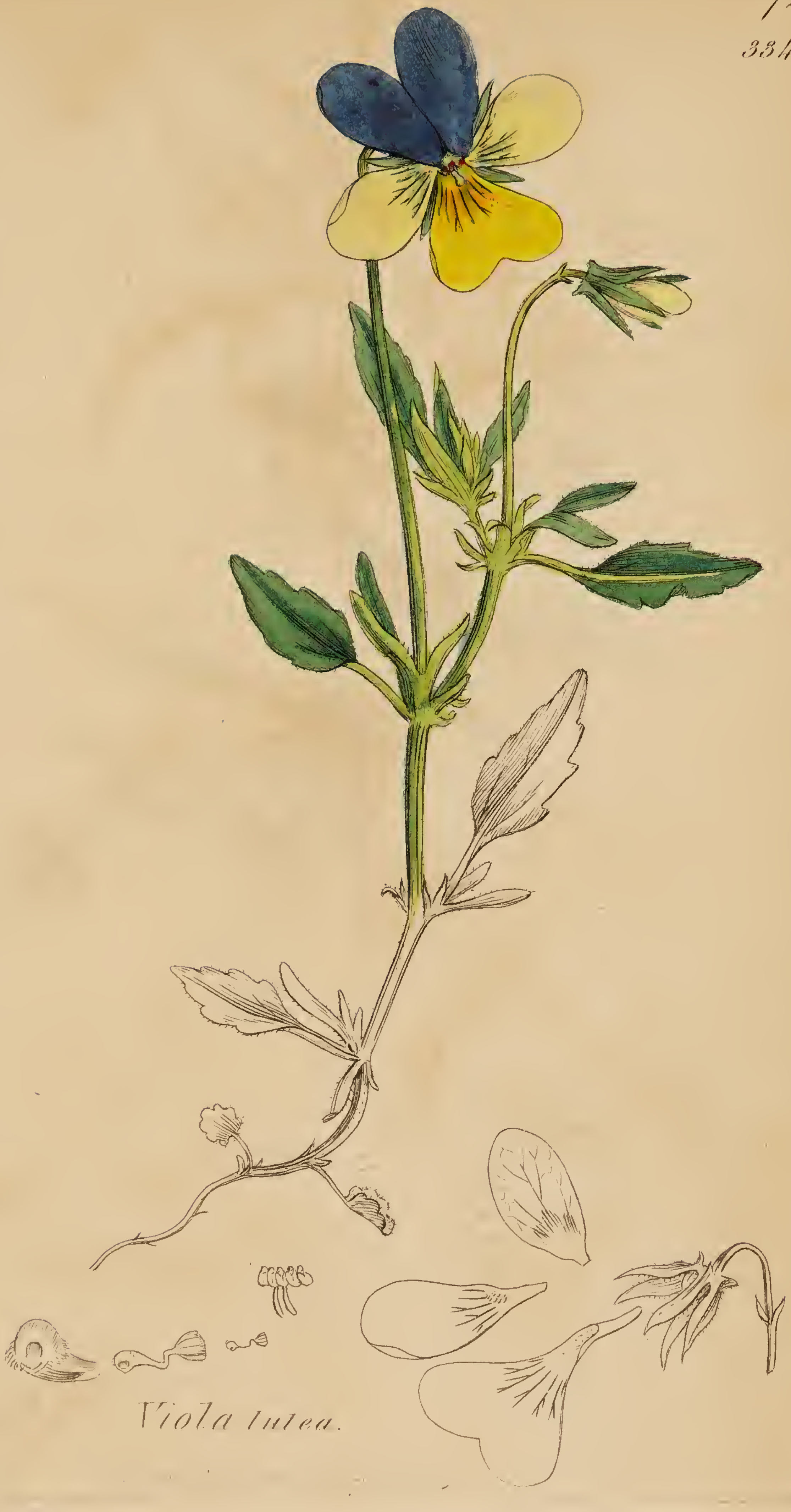
333*



Oct.r 1.st 1831.

721

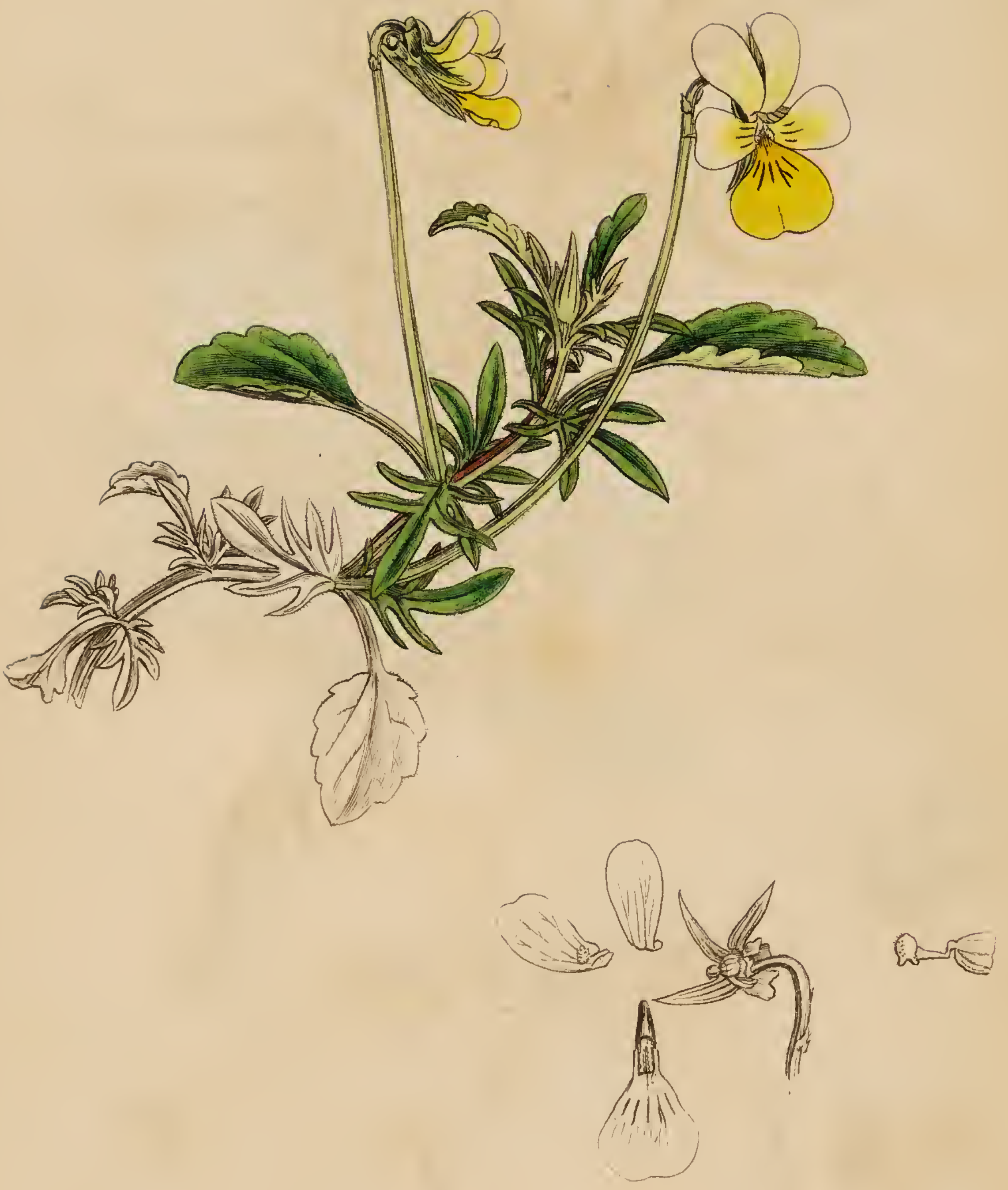
334.



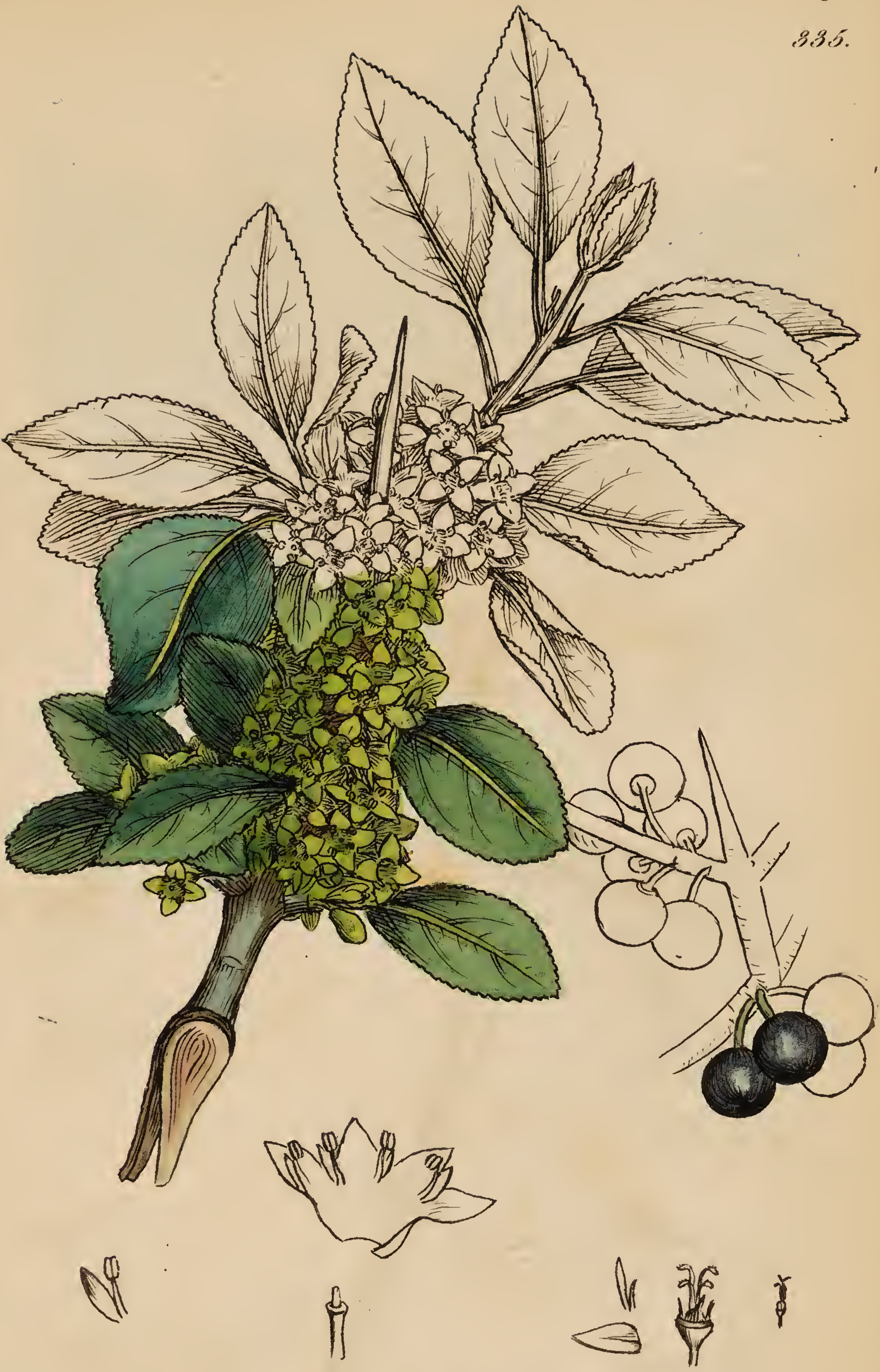
Viola lutea.

2693.

334*



June 1st 1831.

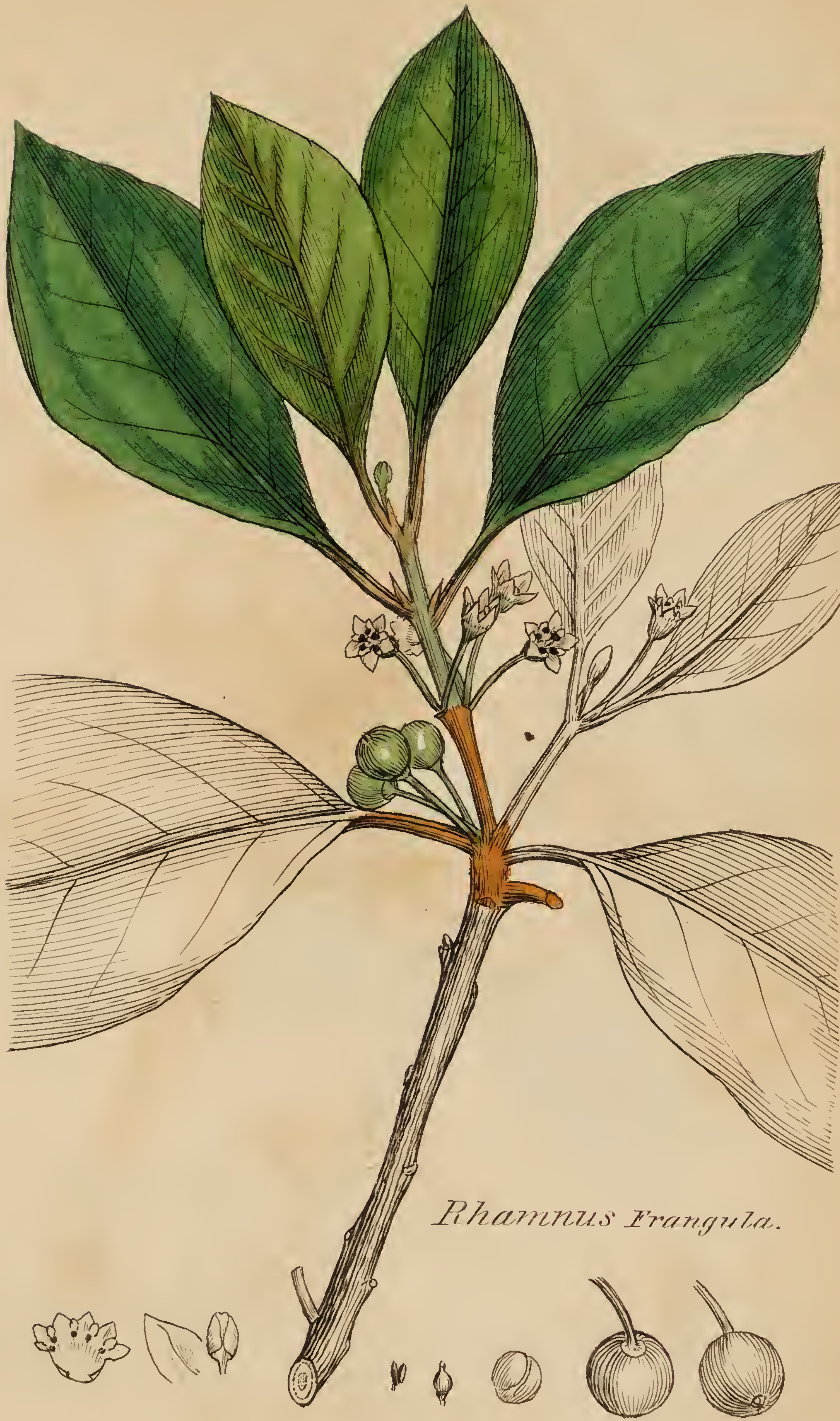


Rhamnus catharticus.

Aug. 1. 1806. Publishd by Ja.s Sowerby London.

250.

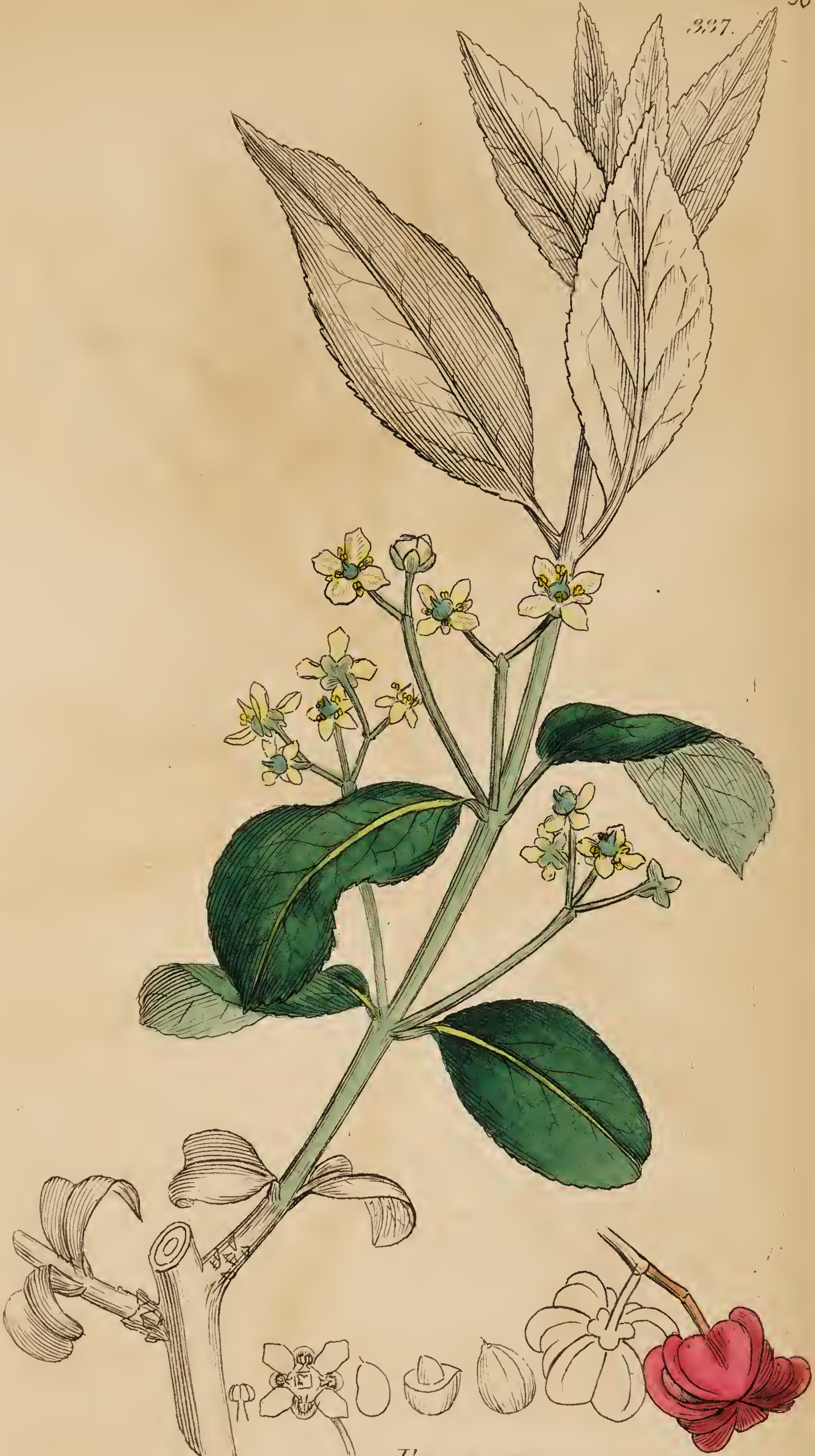
336.



Rhamnus Frangula.

[illegible] 1st 1795 Publish'd by J. Sowerby London

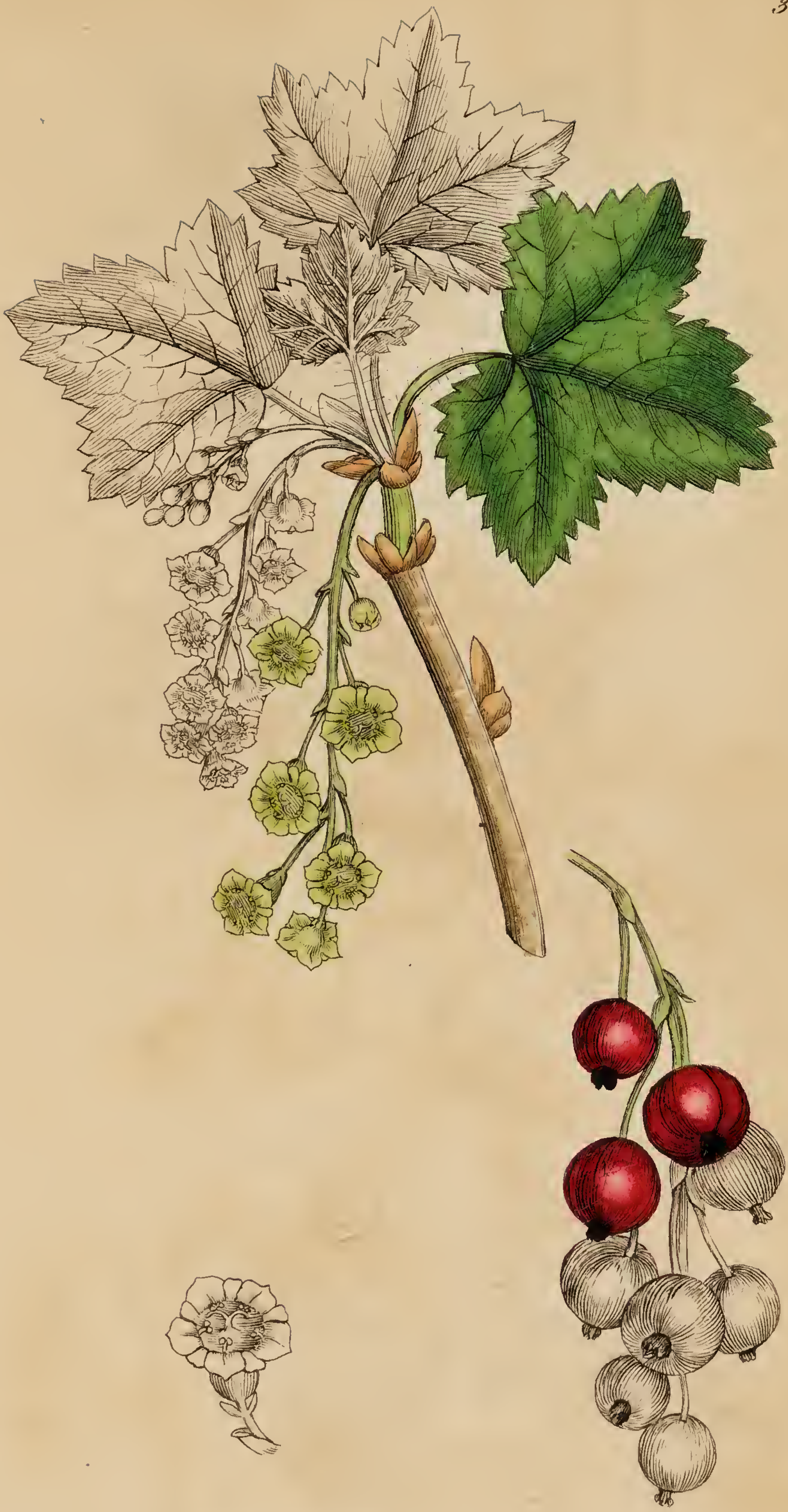
337.



Euonymus europæus.

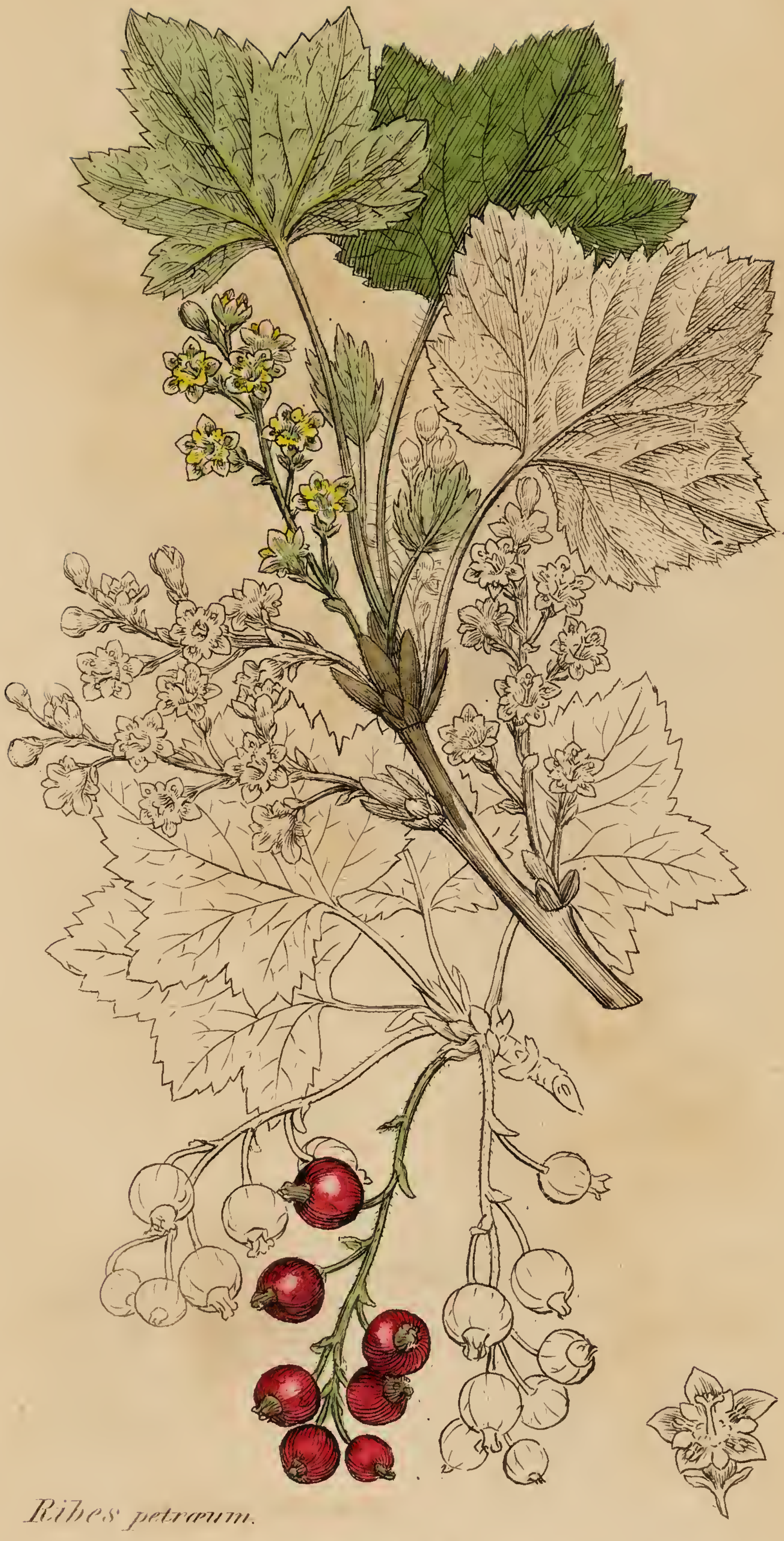
[illegible] Publish'd by J. Sowerby London

1289
338.



Ribes rubrum.

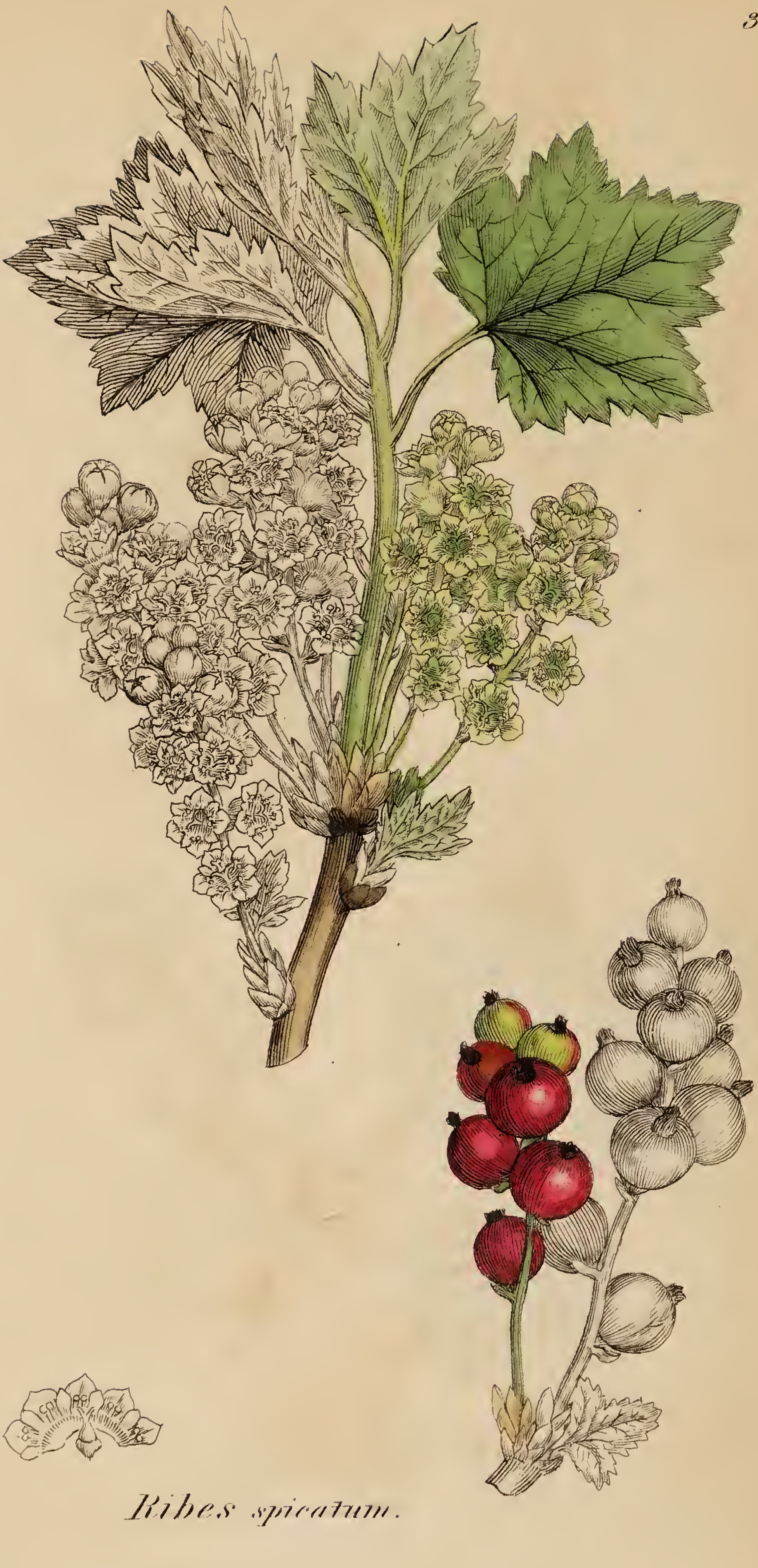
March 1 1804 Published by Jas. Sowerby London.



Ribes petræum.

[illegible]

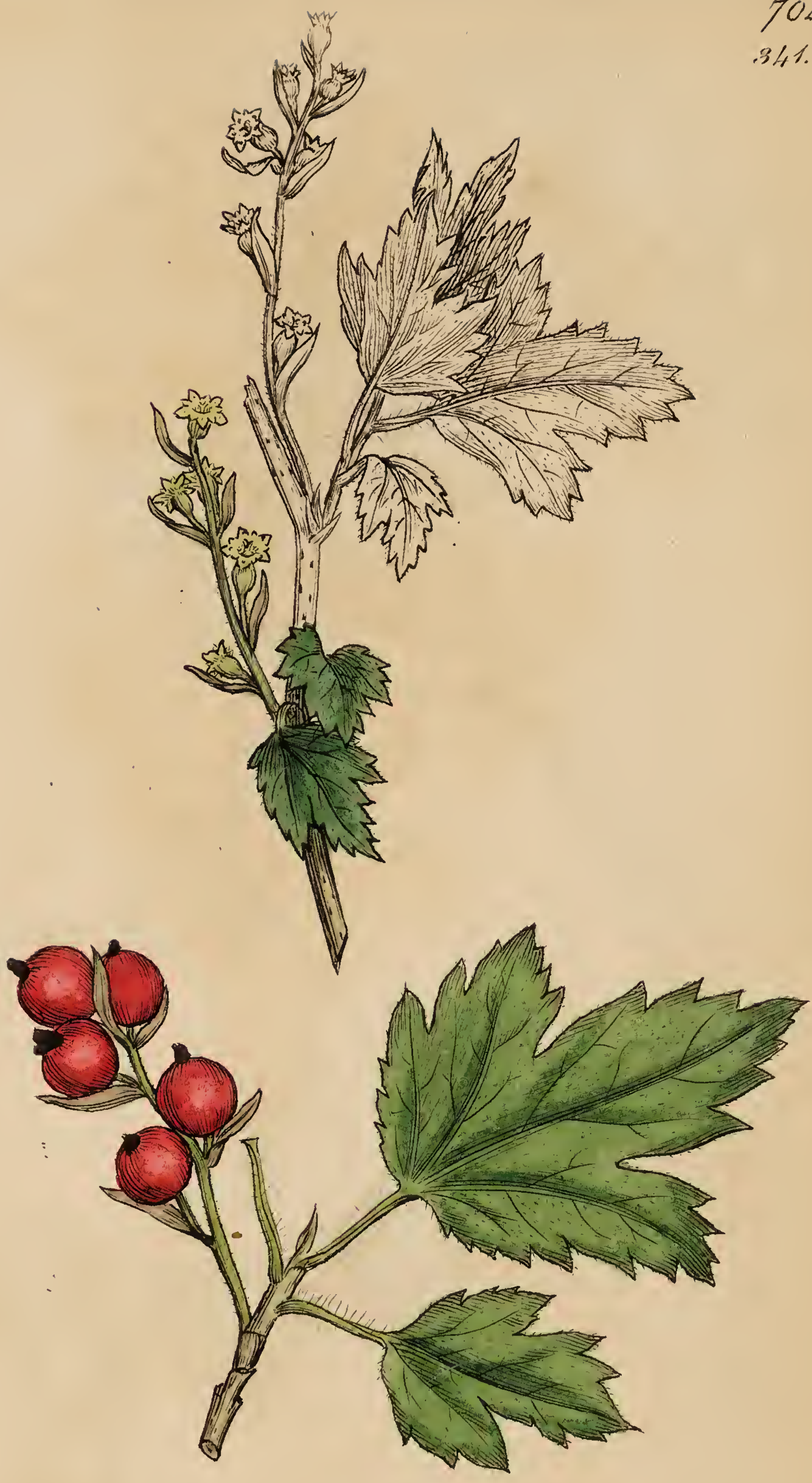
1290
340.



Ribes spicatum.

March 1. 1804. Publiſhed by Jas. Sowerby. London.

704
341.

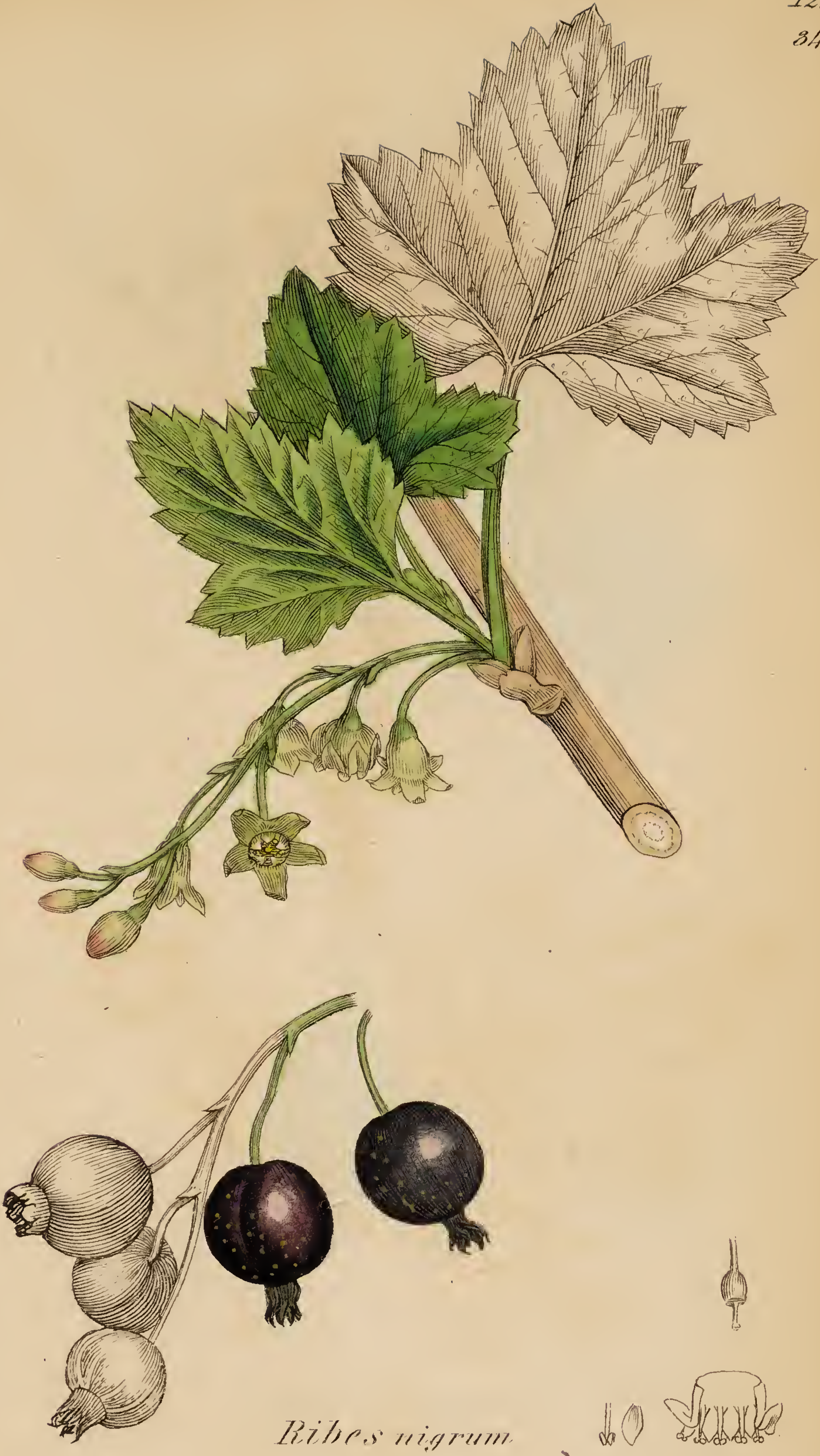


Ribes alpinum.

London Published by [illegible]

1291

342.

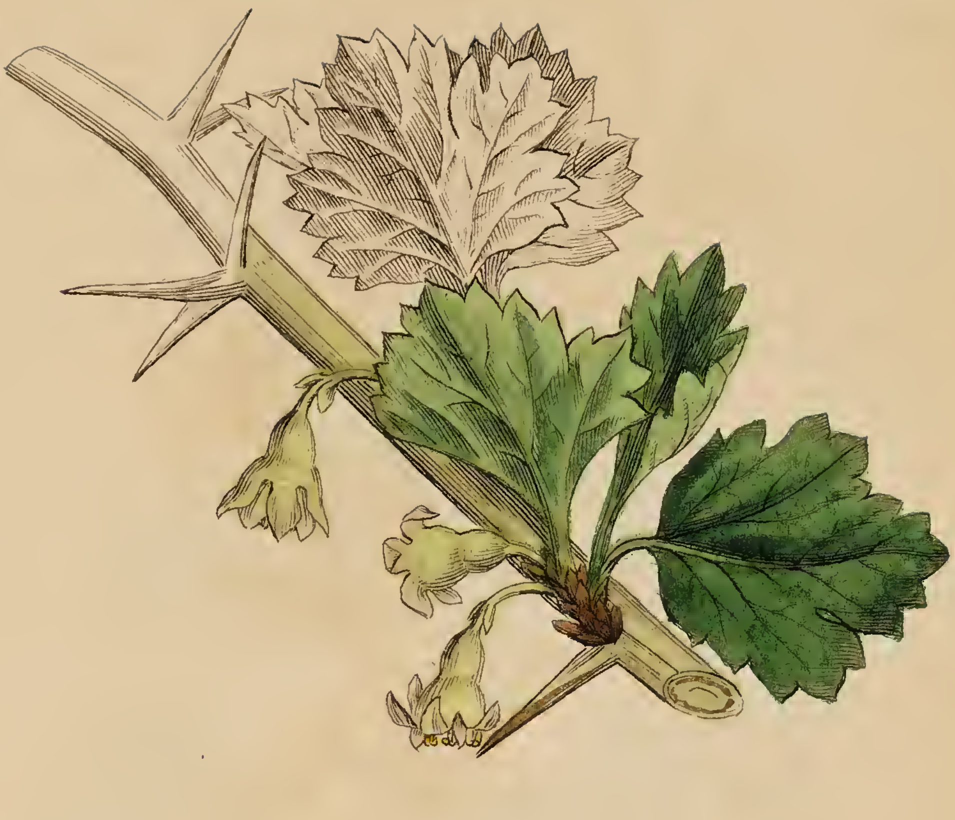


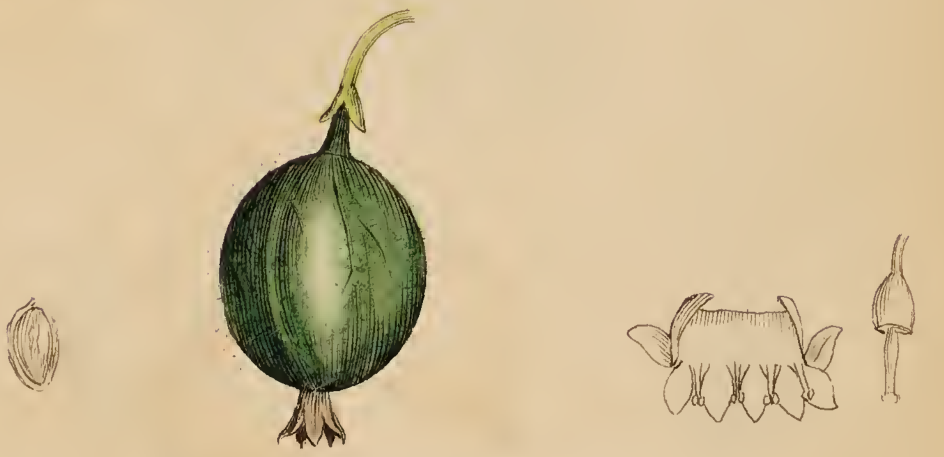
Ribes nigrum

April 1. 1804 Published by Jas. Sowerby. London

1292

343.



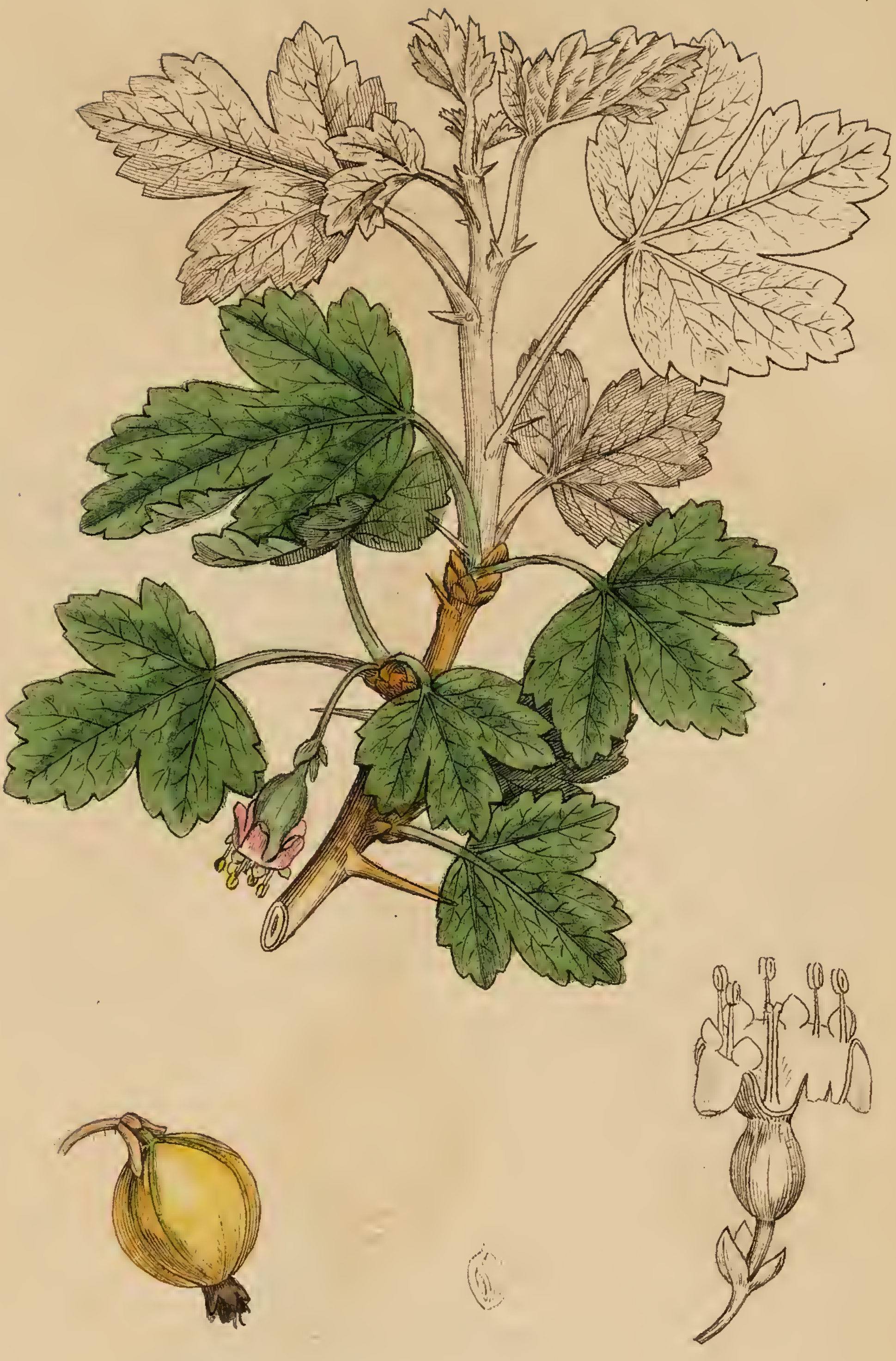


Ribes Groſsularia.

April 1 [illegible] Publiſhed by [illegible] London.

2057

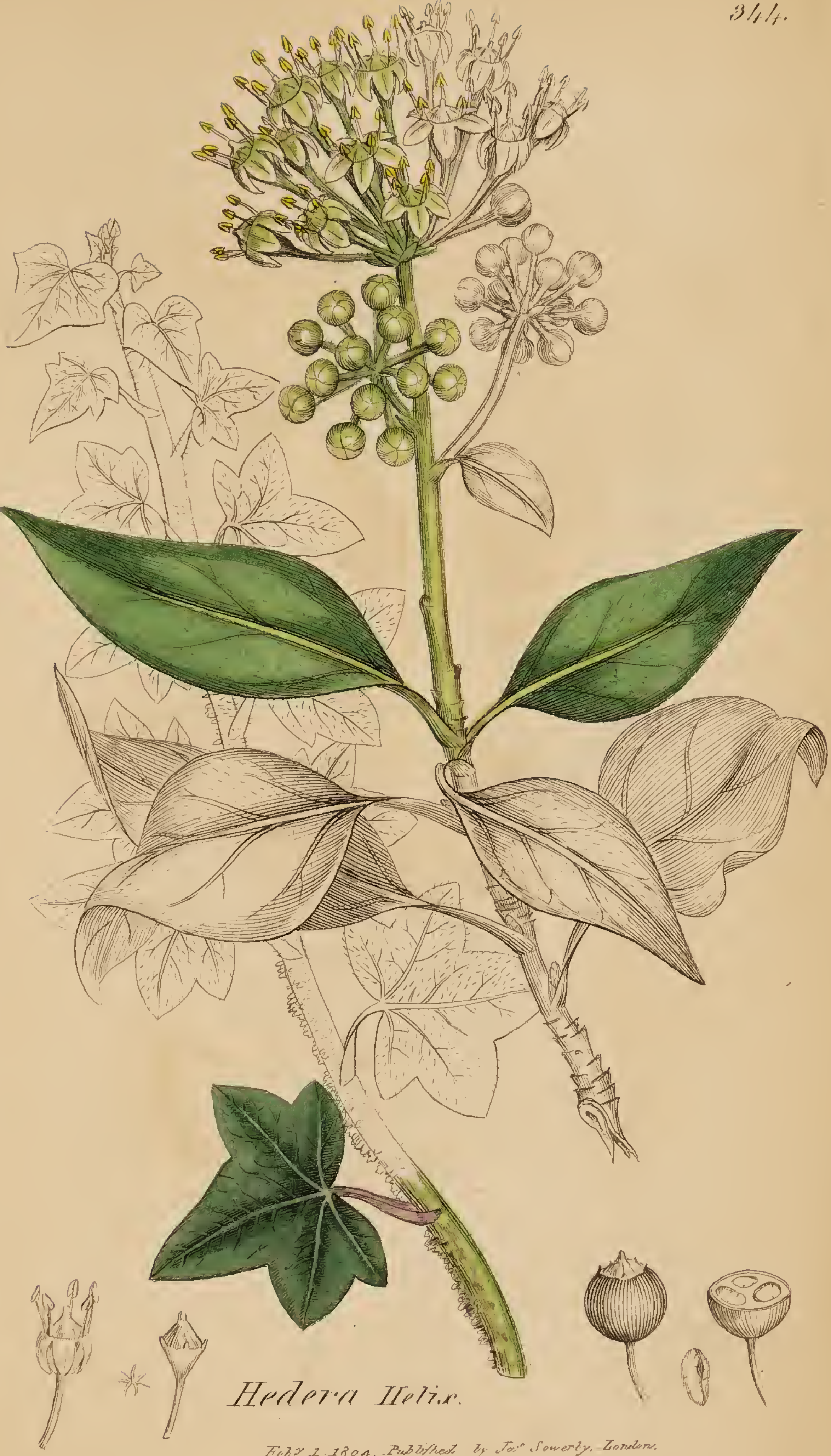
343*



Sep 1 1809 published by Js Sowerby London.

1267

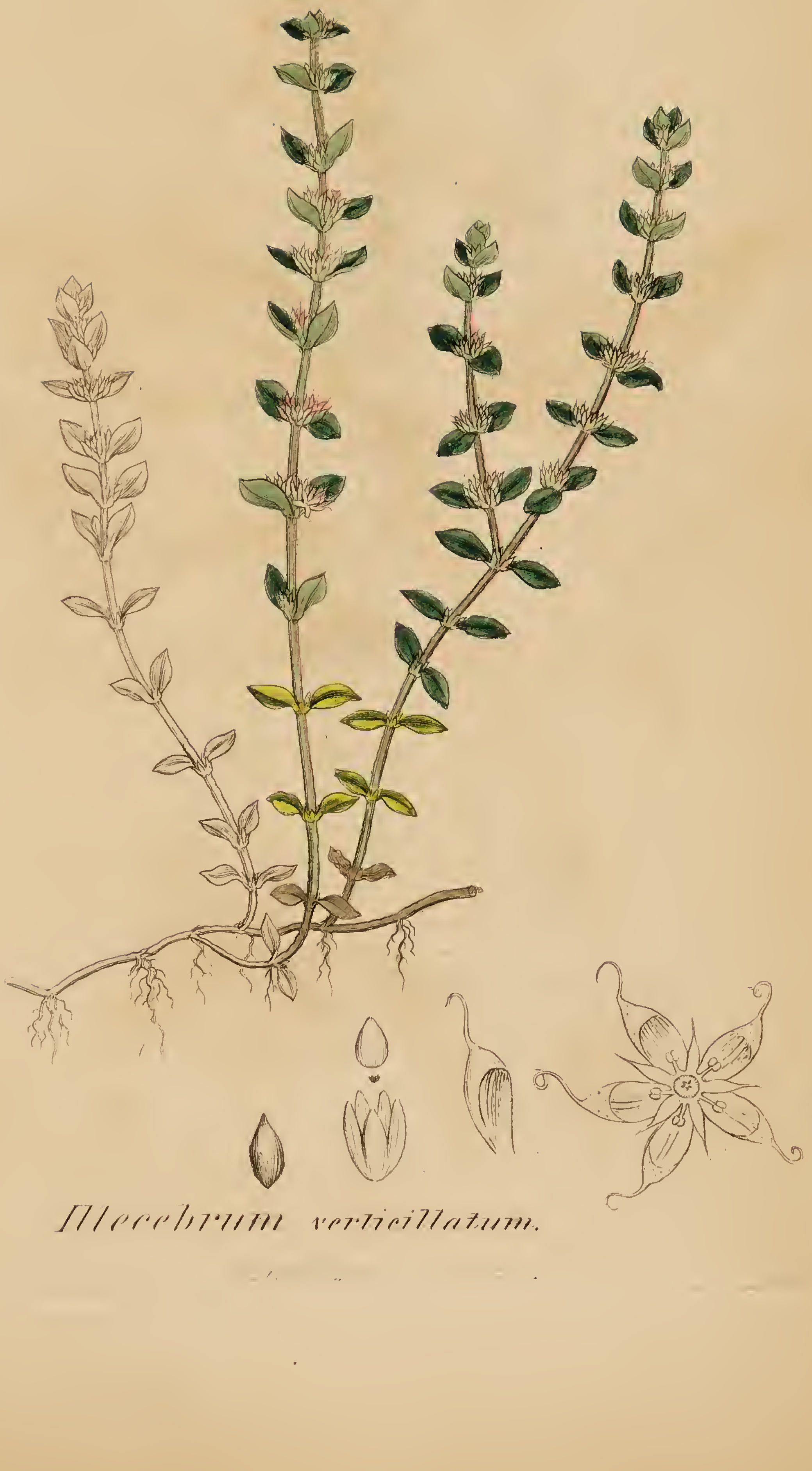
344.



Hedera Helix.

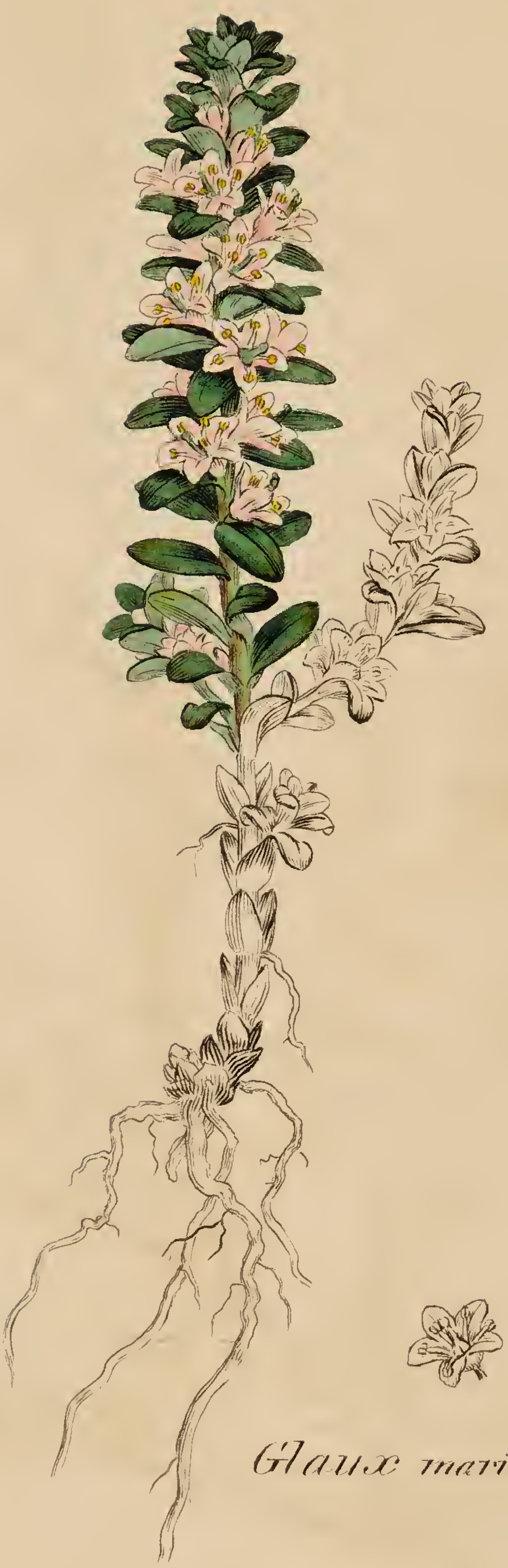
Feb.y 1. 1804. Publiſhed by Jas Sowerby. London.

895.
345.



Illecebrum verticillatum.

346.

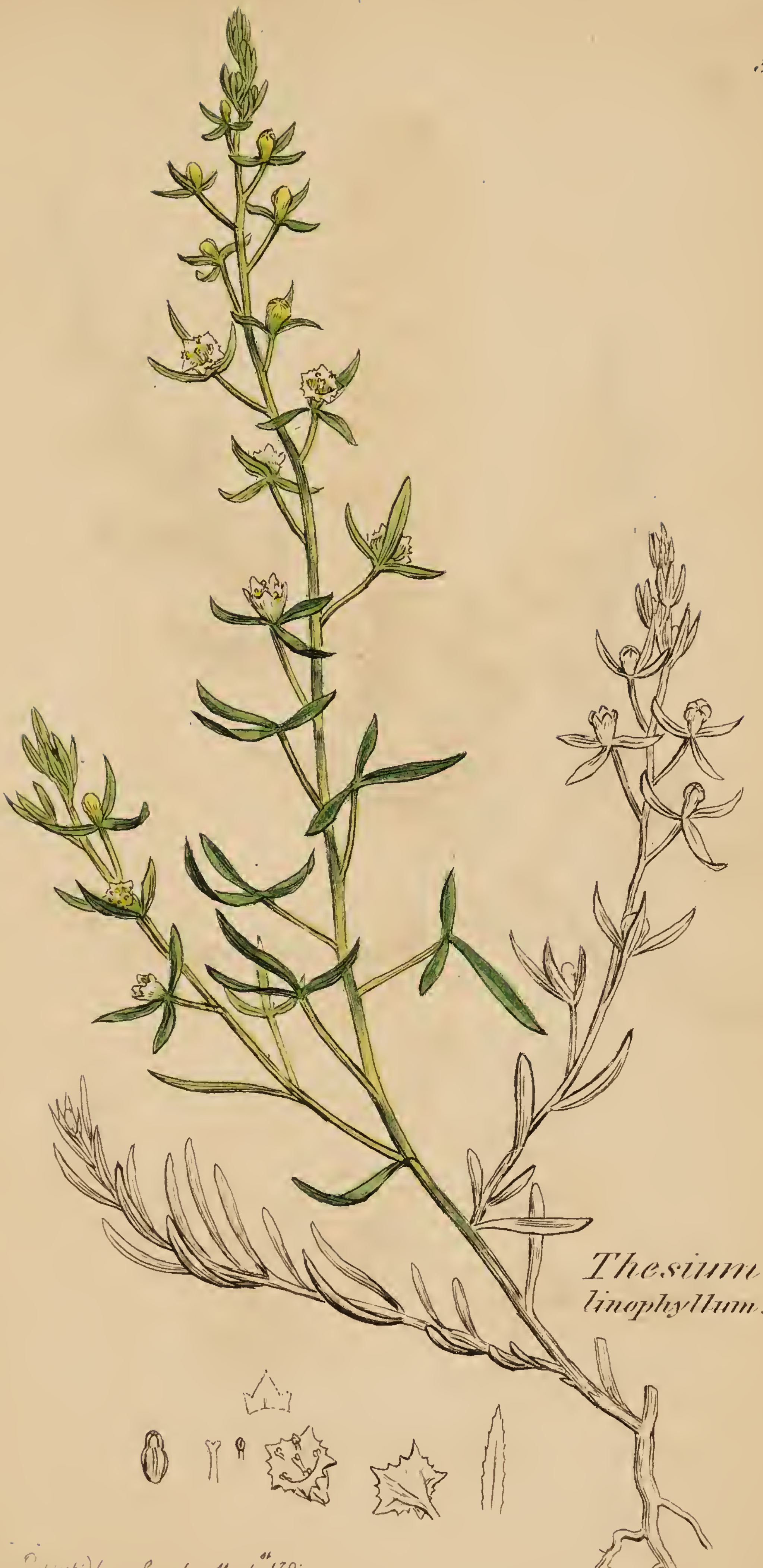


Glaux maritima.

J. Sowerby delin.t April 1. 1791.

247

347.

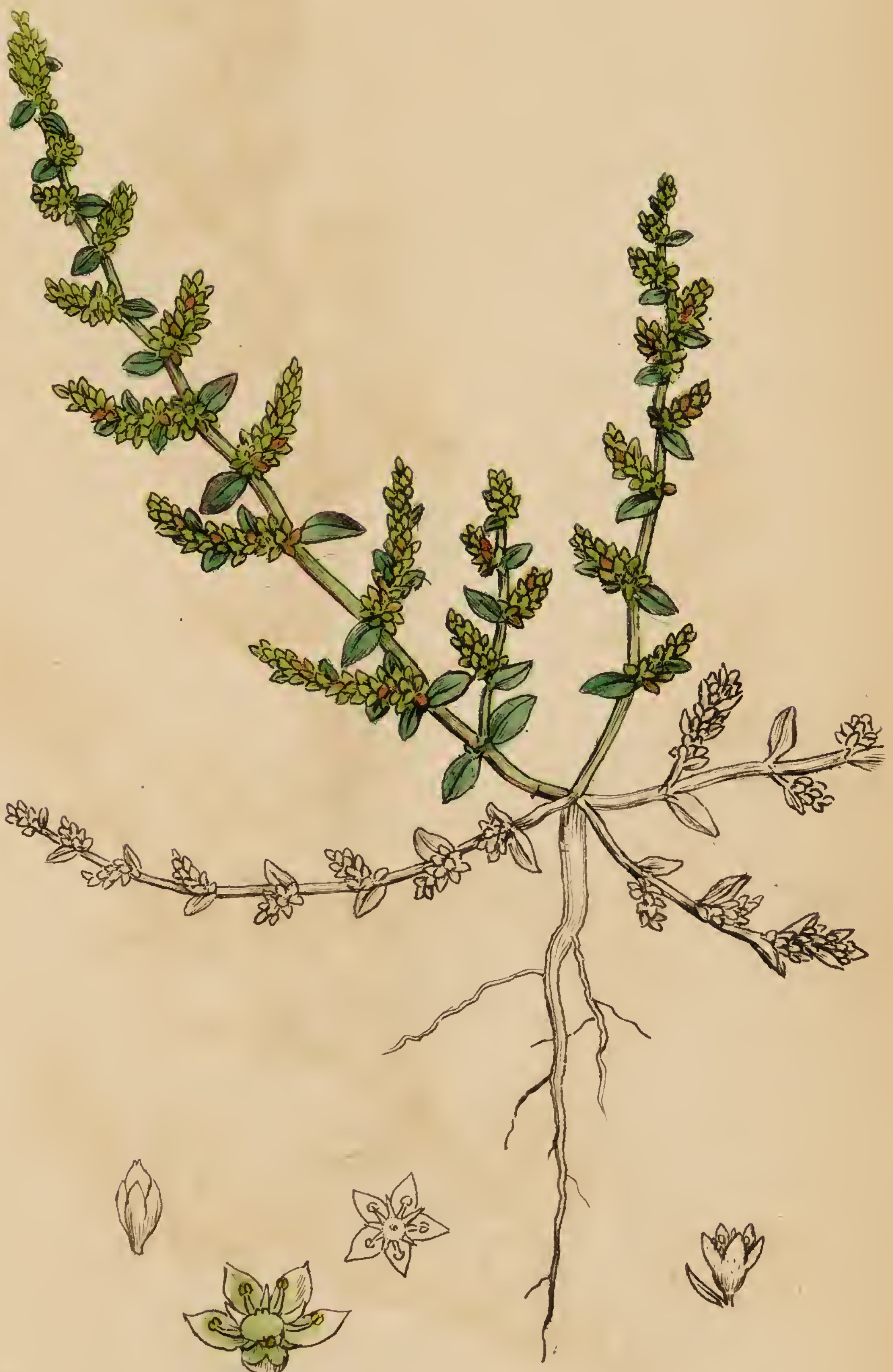


Thesium linophyllum.

Publish'd by Js Sowerby May 1st 179:

206.

348.

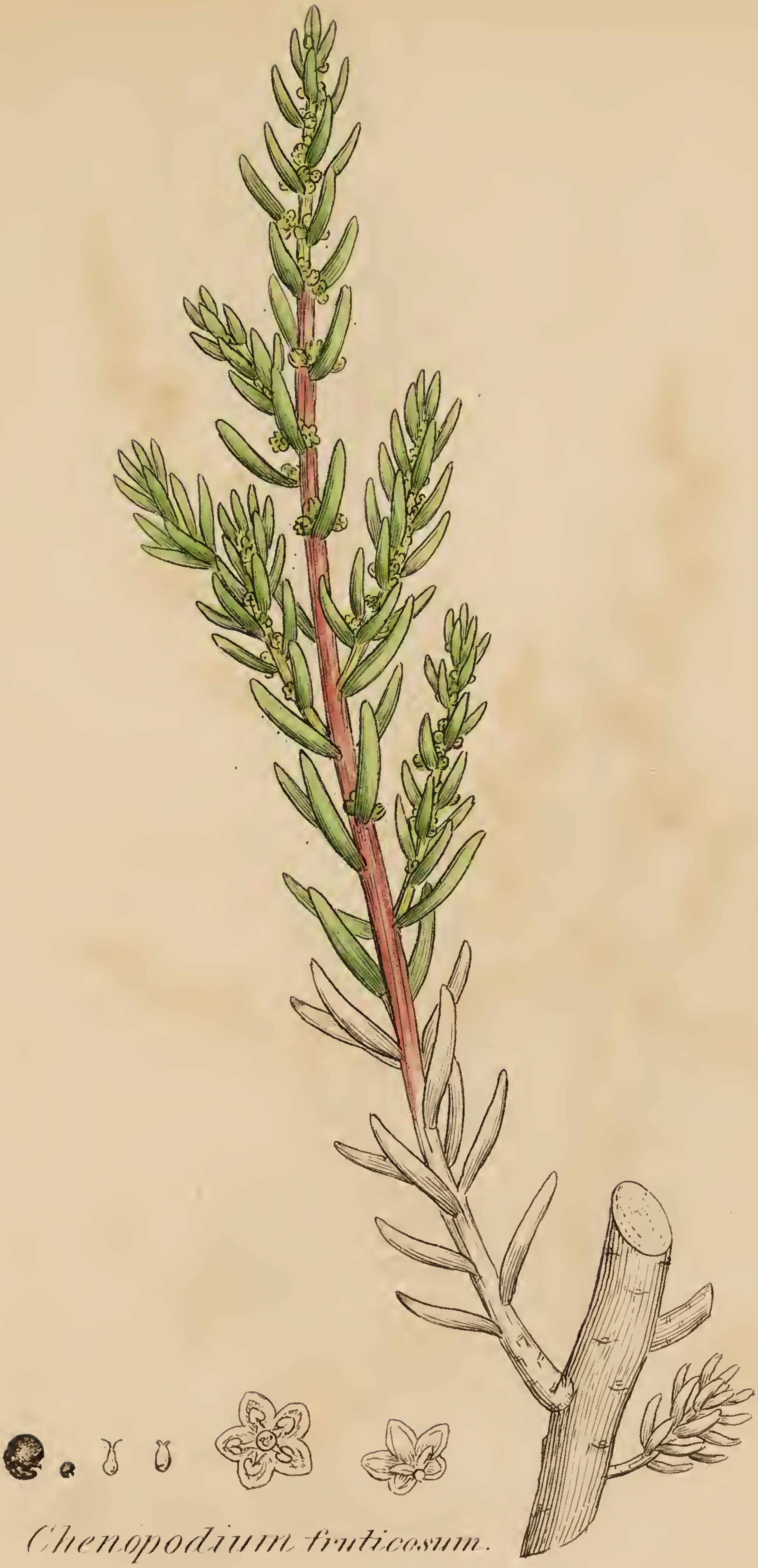


Herniaria glabra.

Js Sowerby delt Octr 1 1794

635.

349.

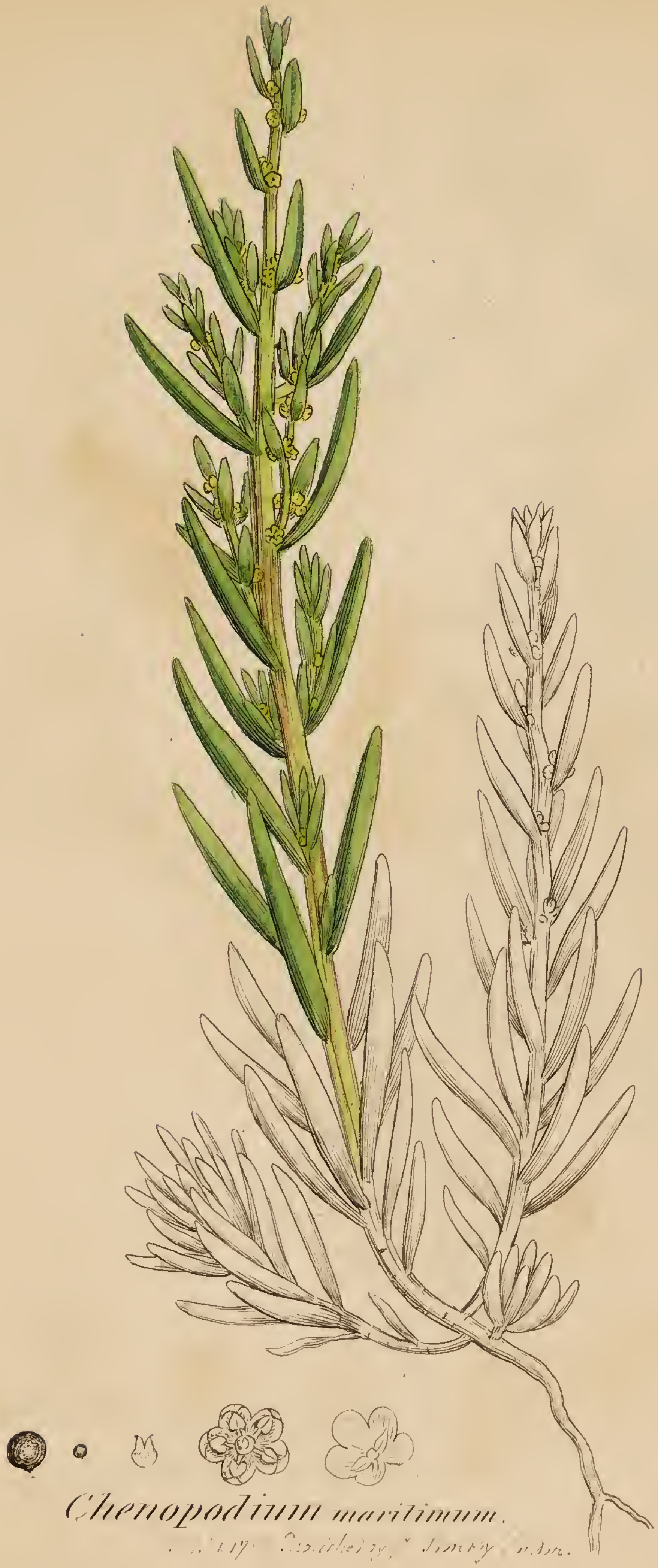


Chenopodium fruticosum.

Sepr 1. 1799 Published by Js Sowerby.

633.

350.

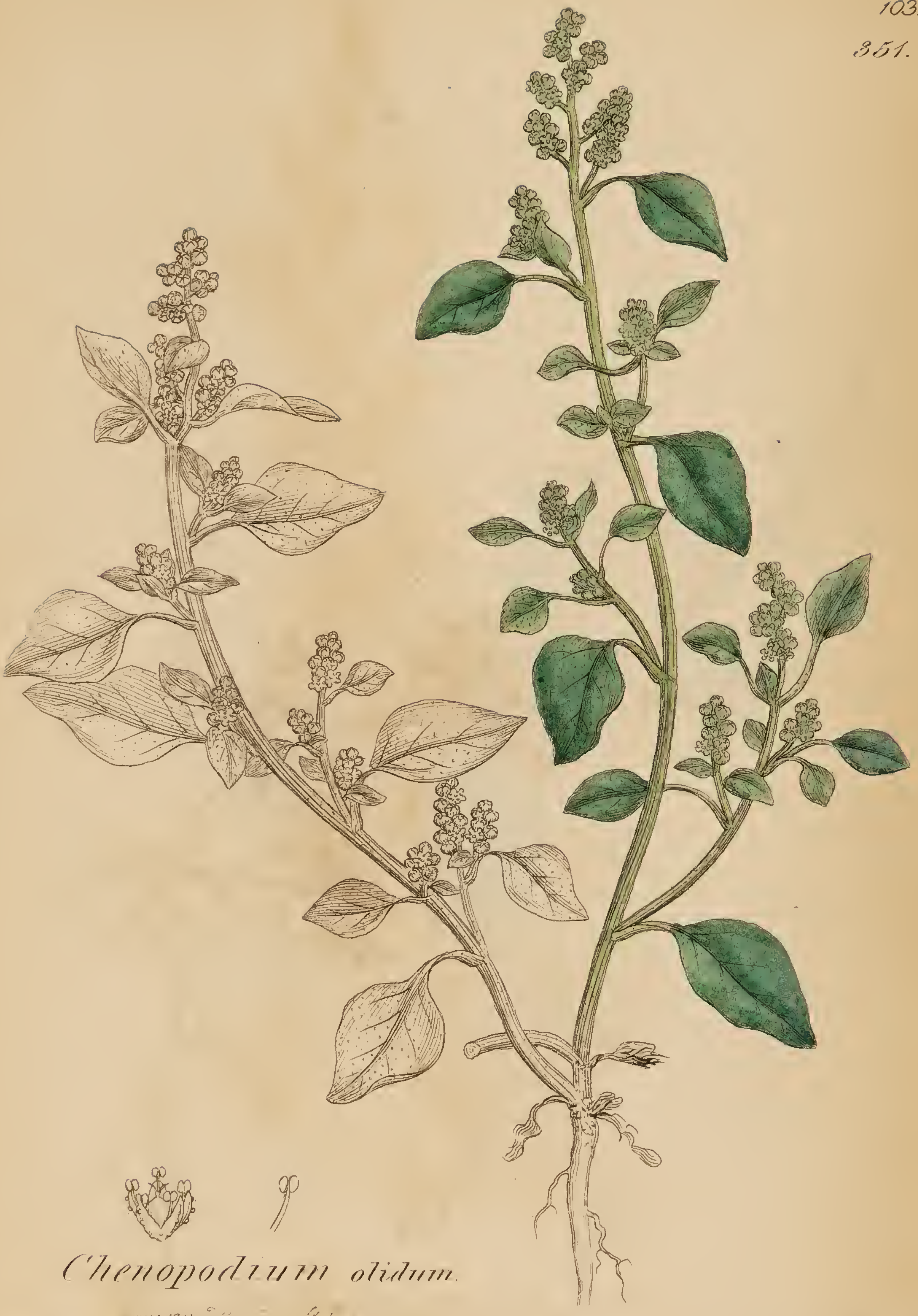


Chenopodium maritimum.

Pub. by Sowerby, & Simery London.

1034.

351.

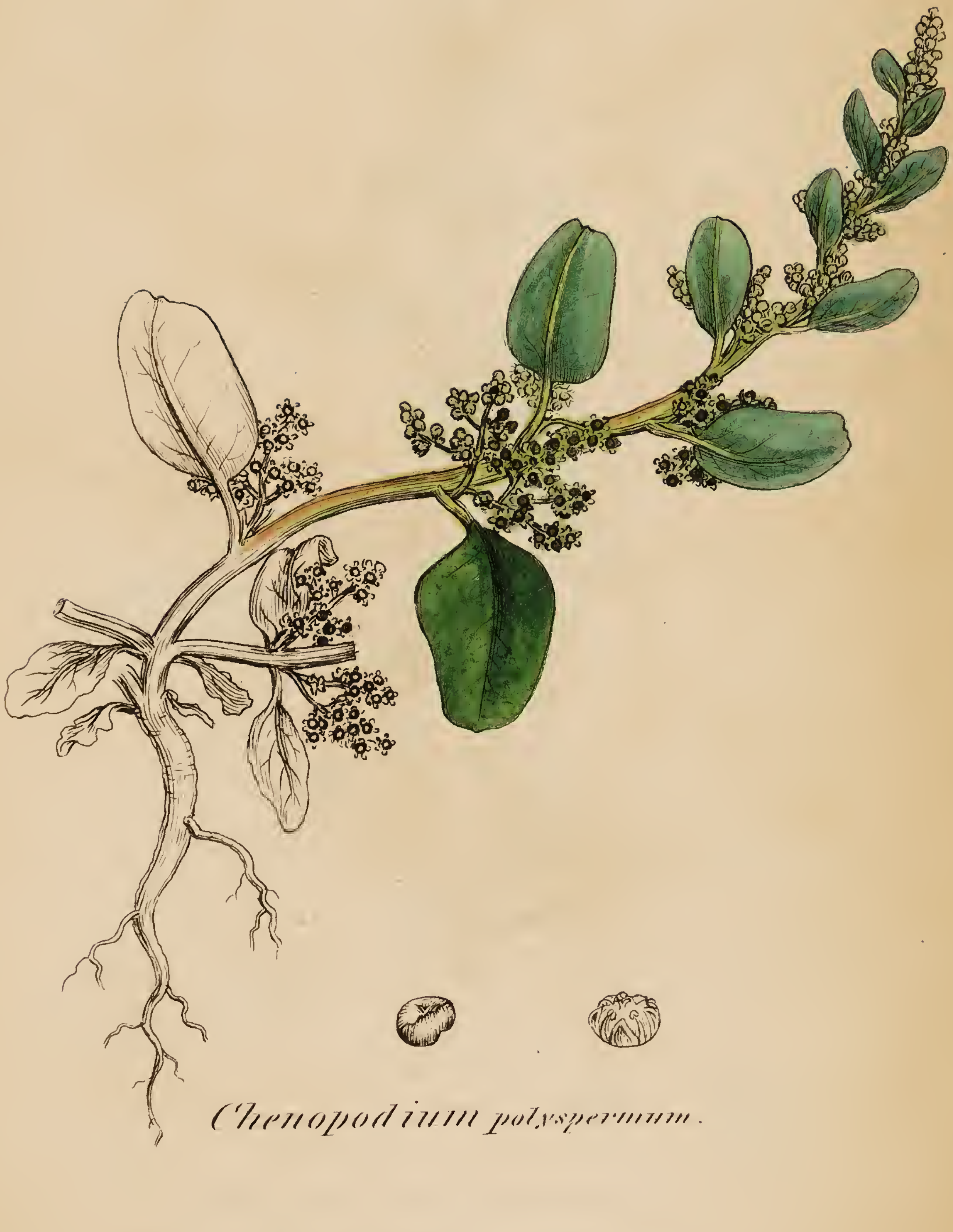


Chenopodium olidum.

[illegible]

1480

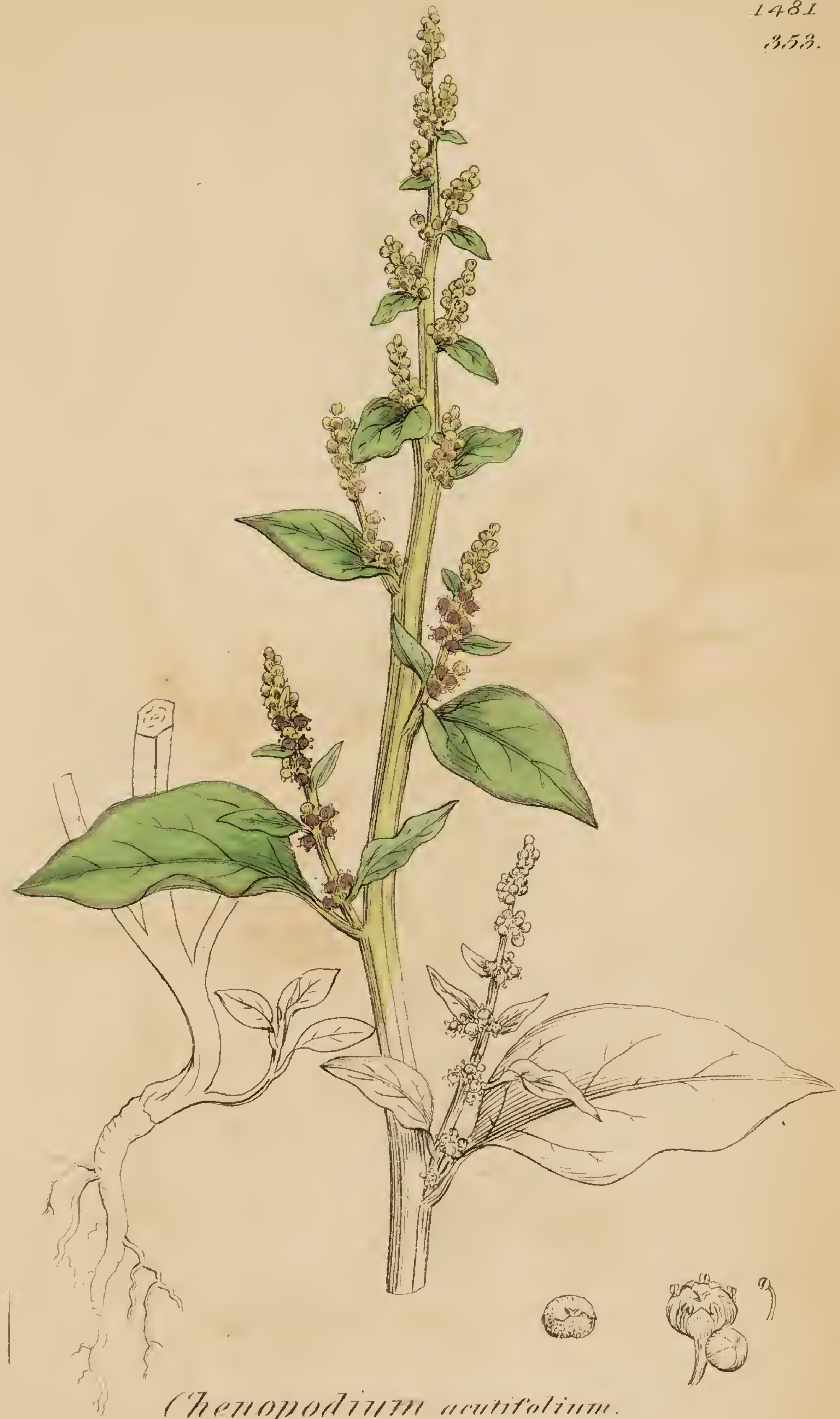
352.



Chenopodium polyspermum.

July 1. 1805. Publish'd by Ja^s Sowerby, London

1481
353.

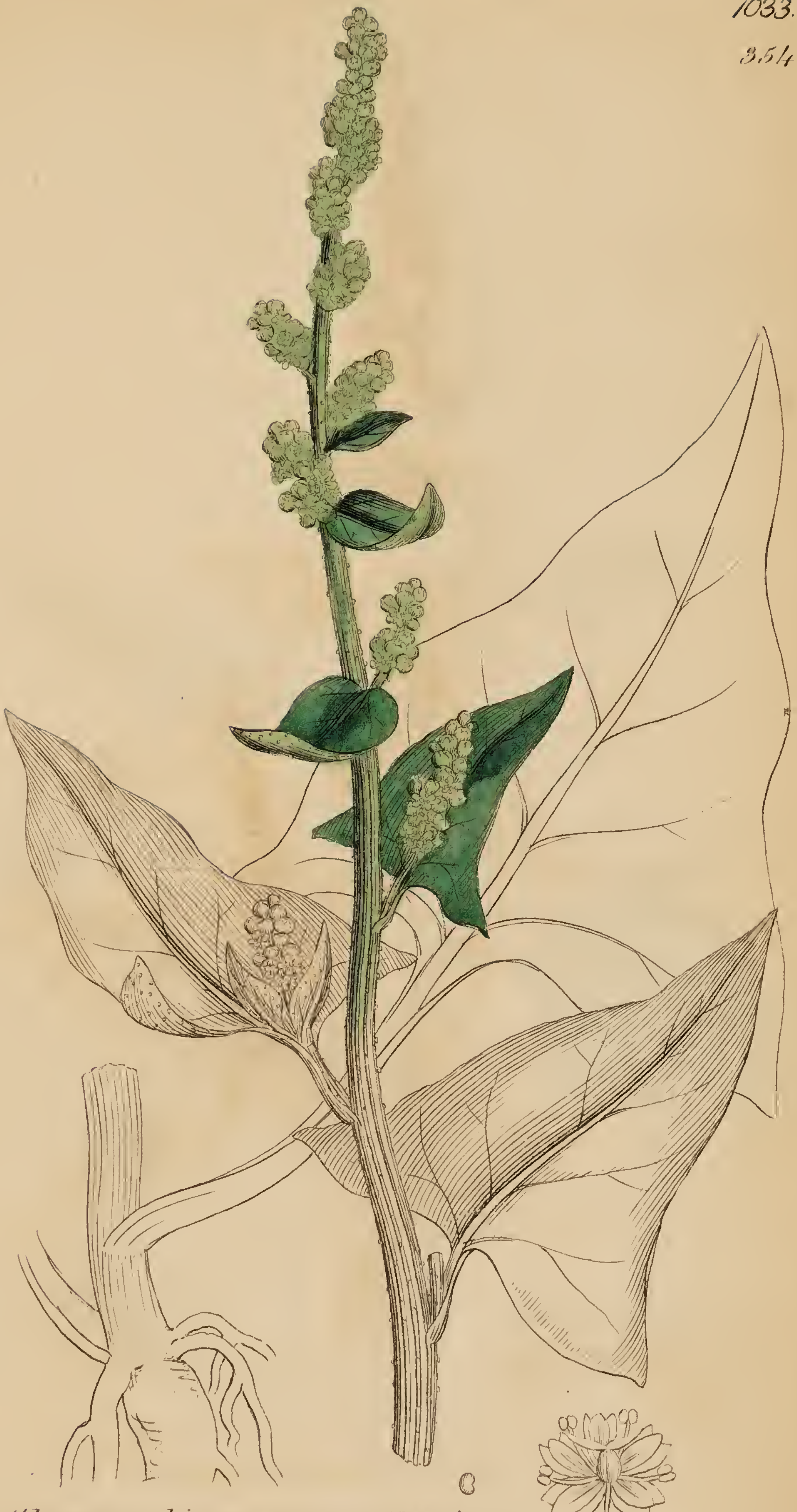


Chenopodium acutifolium.

July 1. 1805 Published by [illegible] Sowerby London

1033.

354

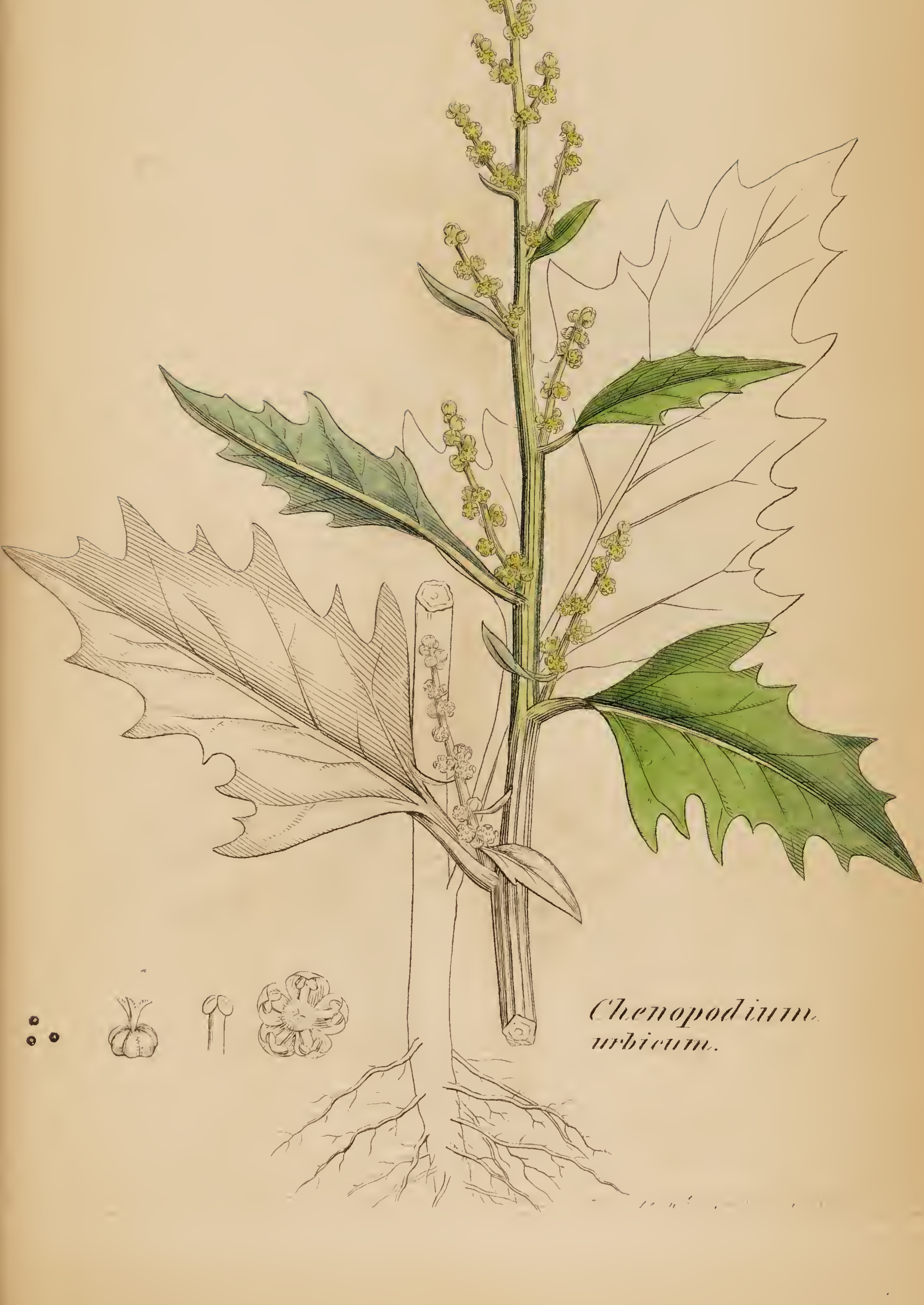


Chenopodium Bonus-Henricus.

[illegible]

717.

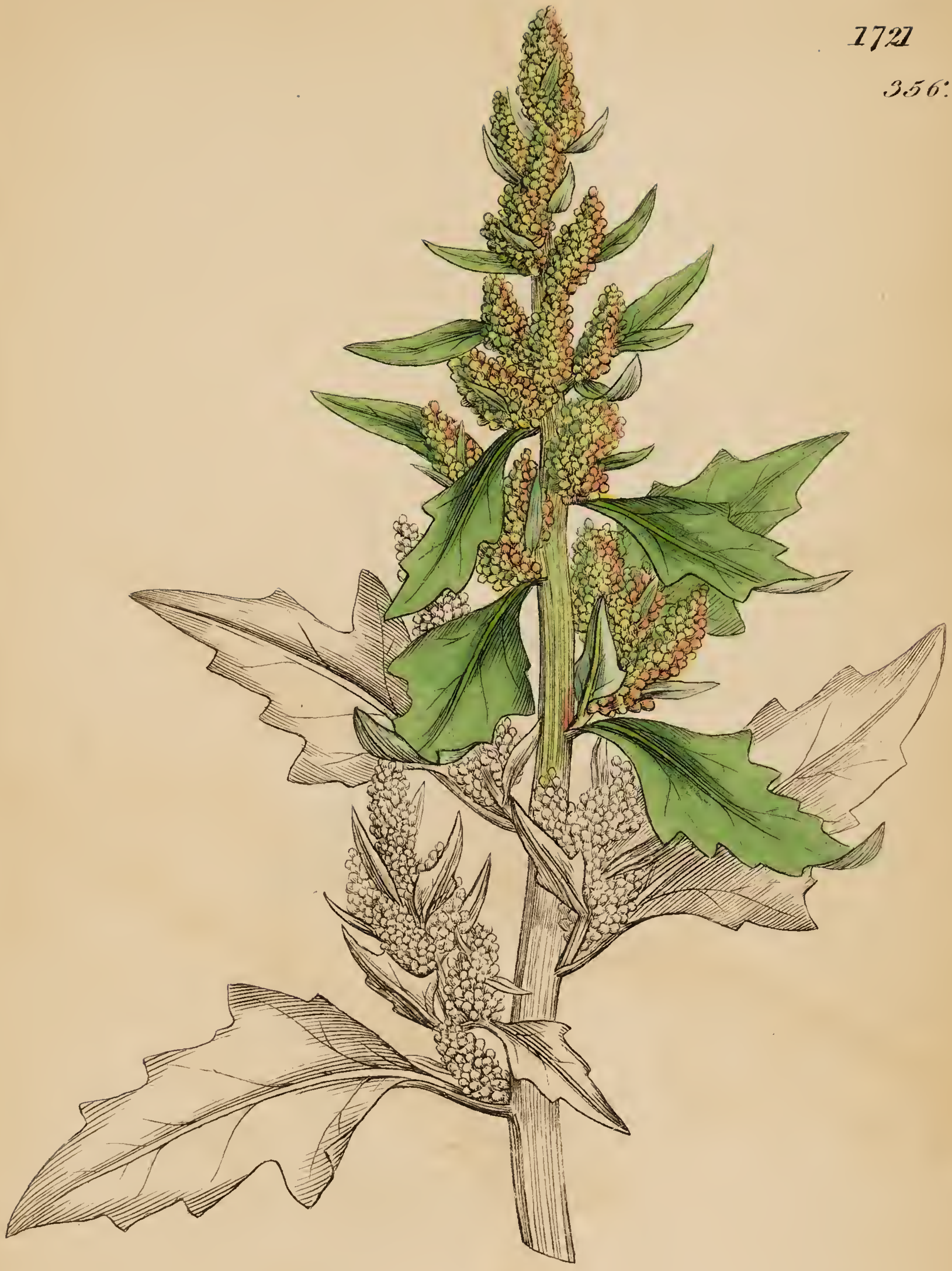
355.



Chenopodium urbicum.

1721

356.

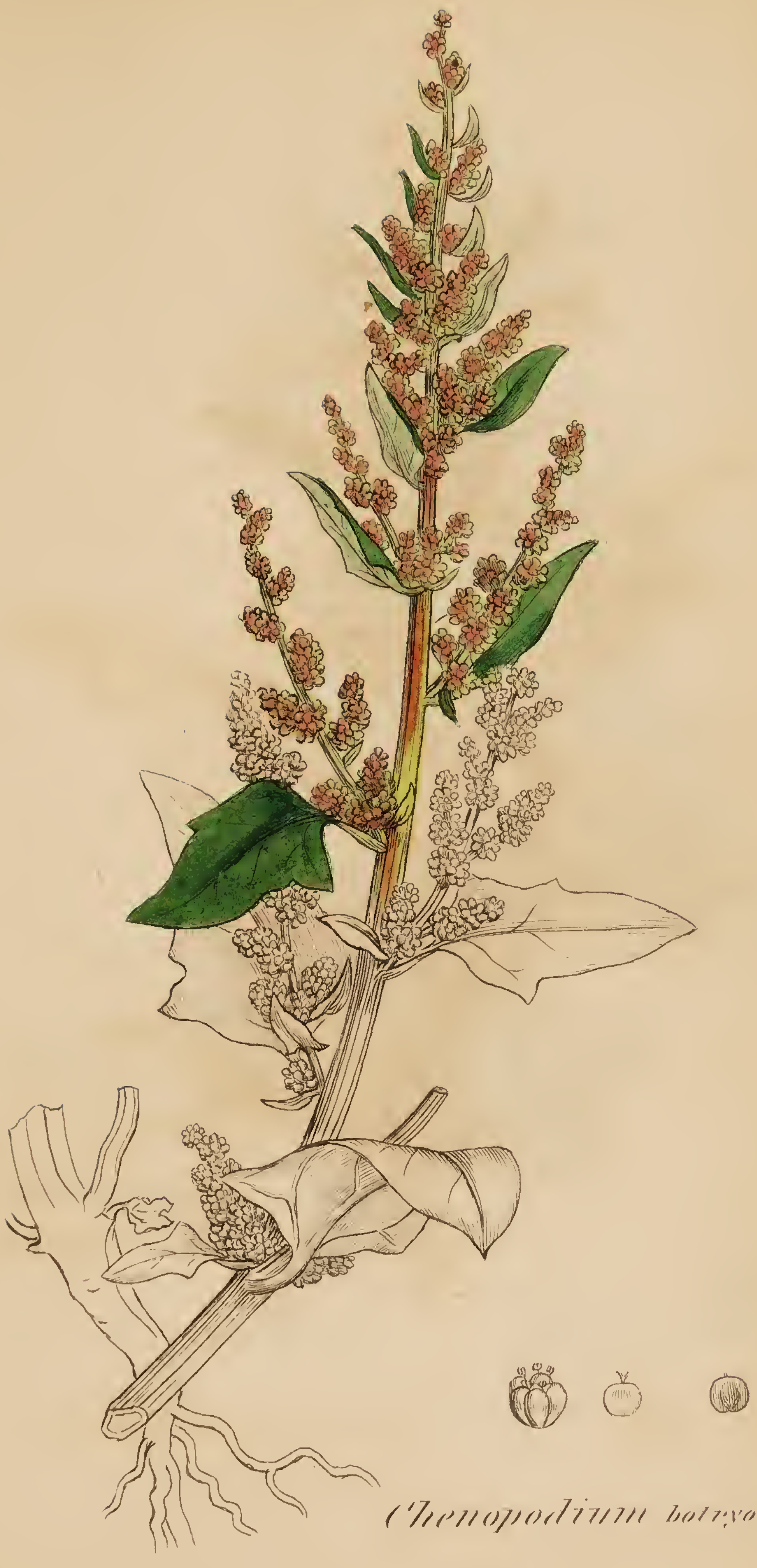


Chenopodium rubrum.

Mar. 1. 1807, Publish'd by Jas. Sowerby, London.

2247

357.

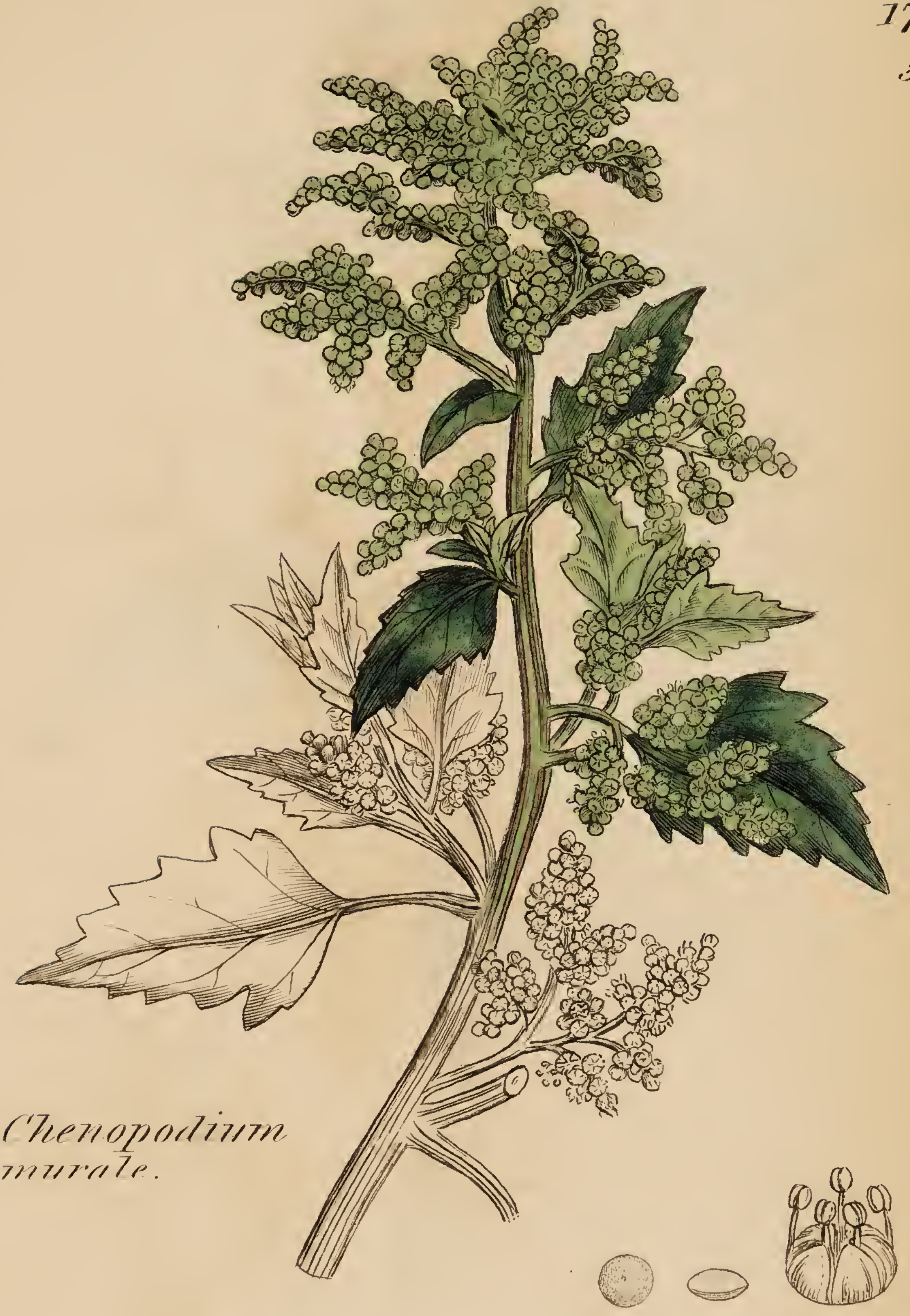


Chenopodium botryoides.

Feb. 1. 1811 published by Jas. Sowerby London

1722

358.



Chenopodium murale.

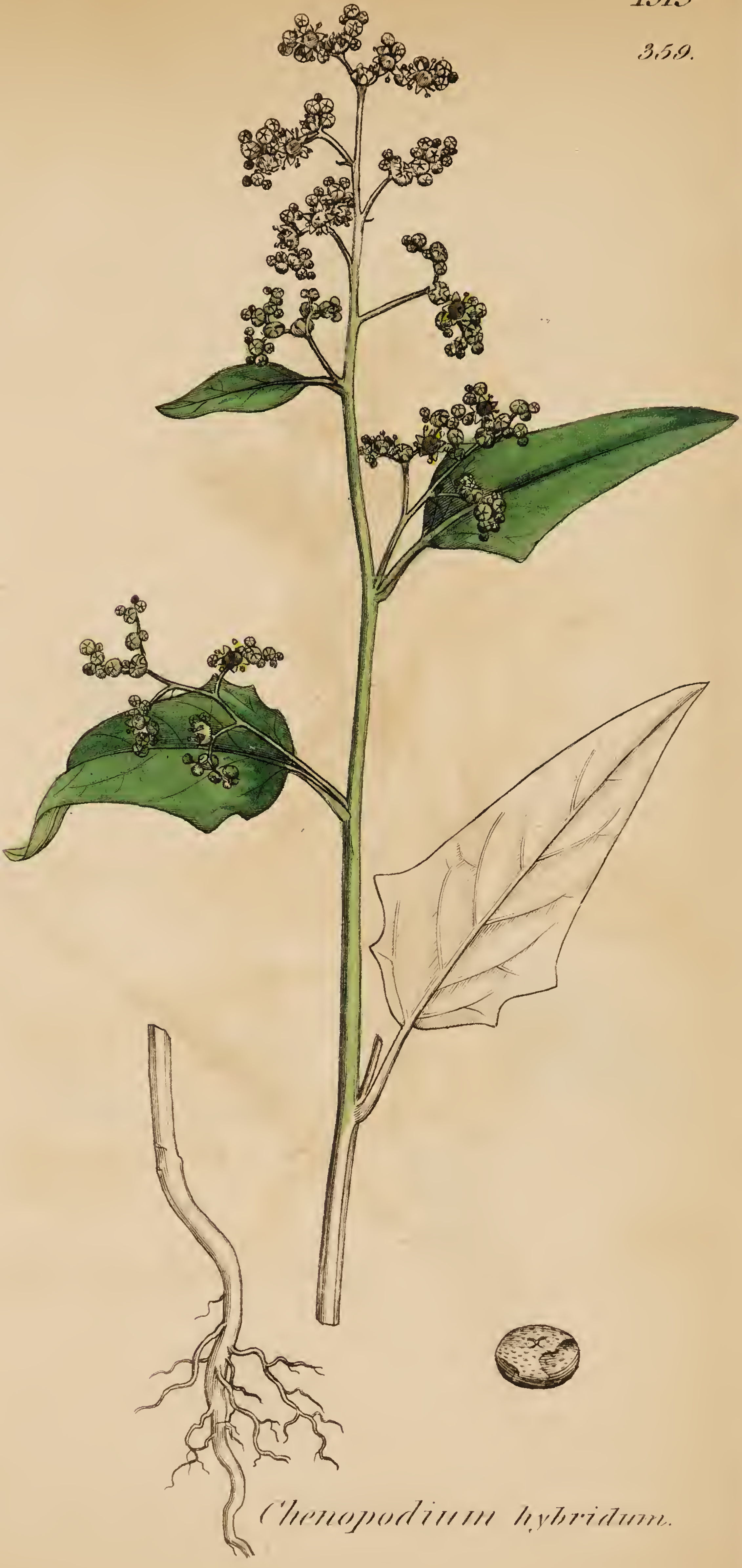
Mar. 1.1807 Publish'd by Jas. Sowerby, London.

[illegible]

[illegible]

1919

3.59.

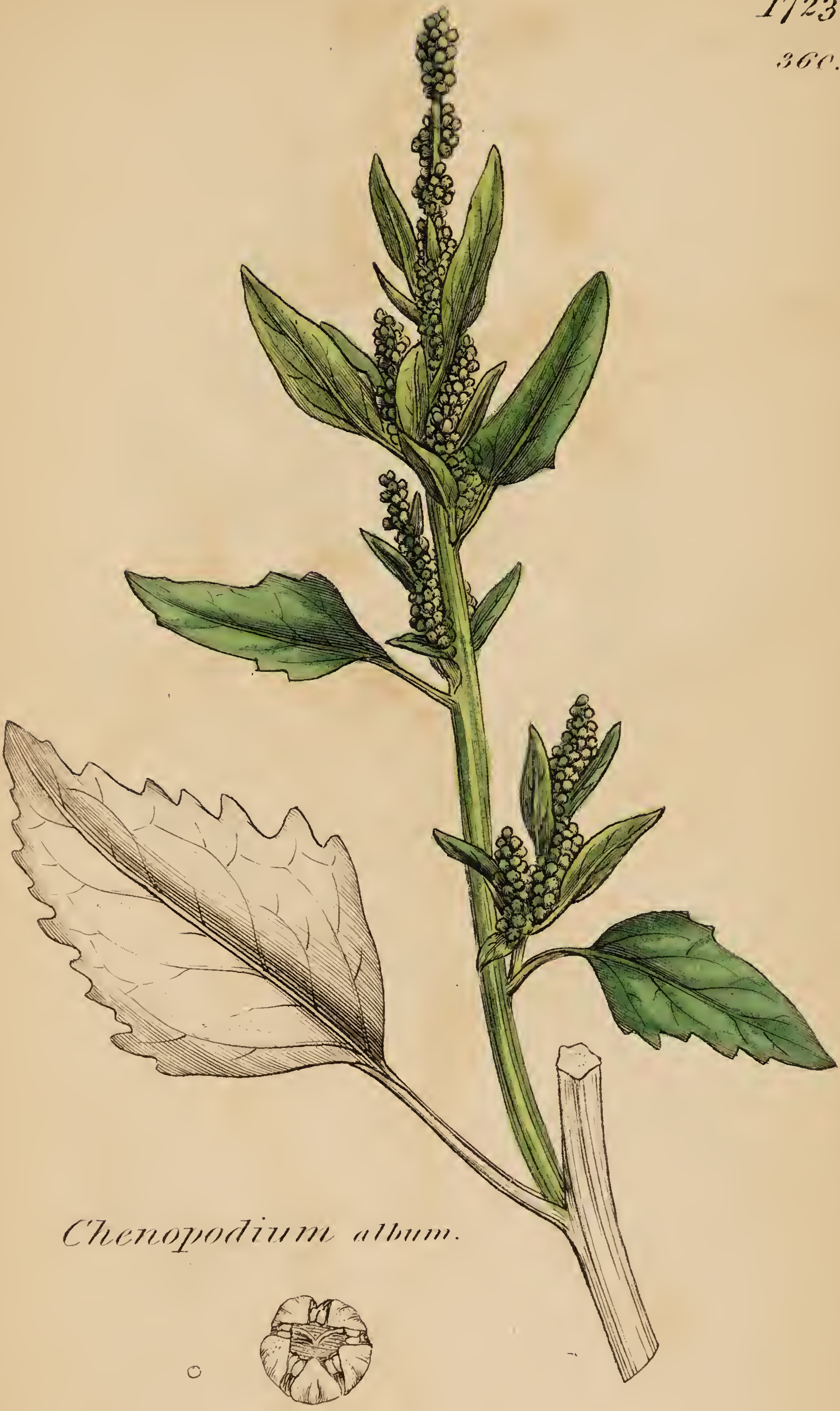


Chenopodium hybridum.

Aug. 1. 1808. Publish'd by Ja.s Sowerby, London.

1723

360.

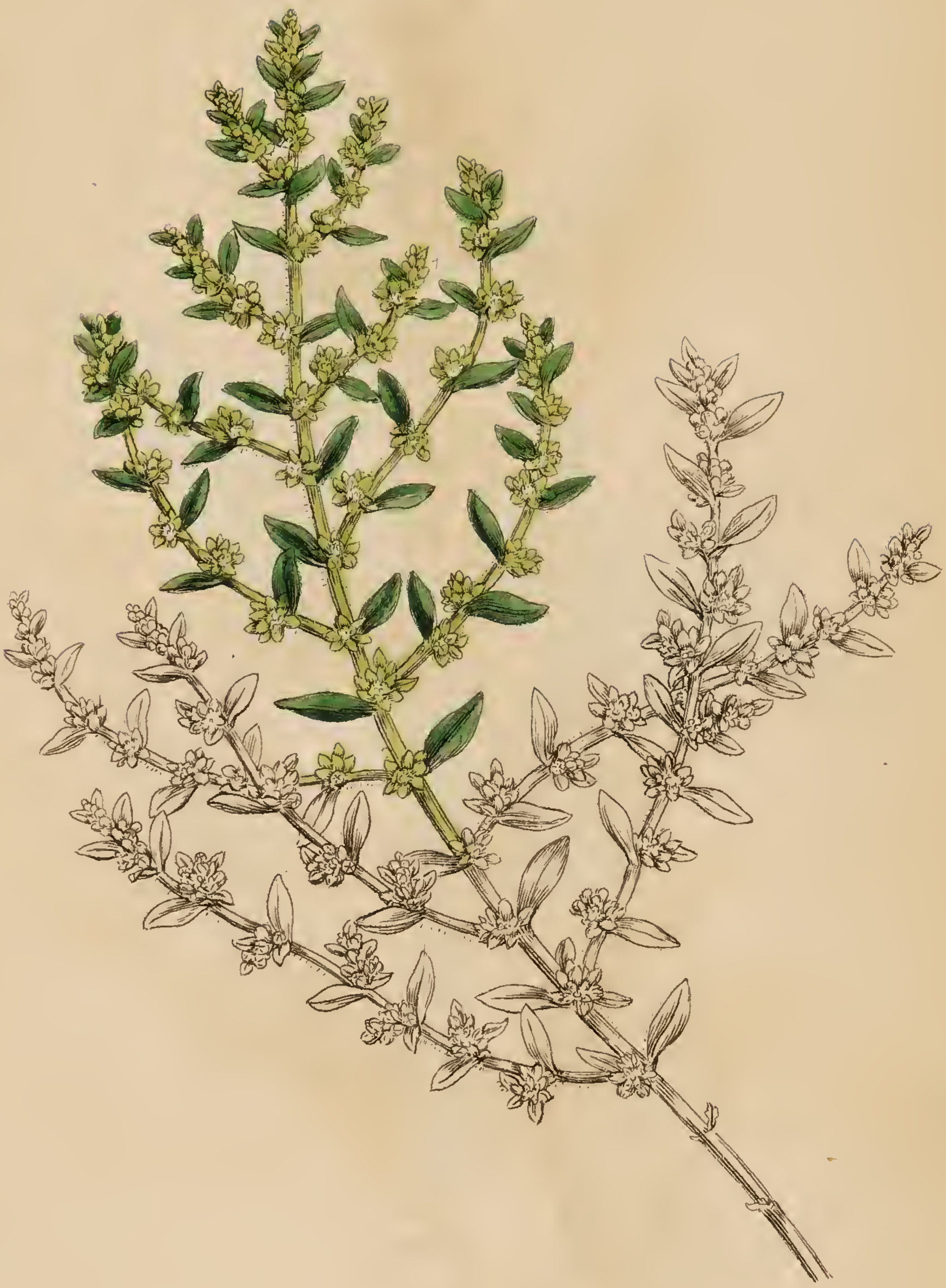


Chenopodium album.

Apr. 1. 1807. Publish'd by Ja.s Sowerby London.

1379

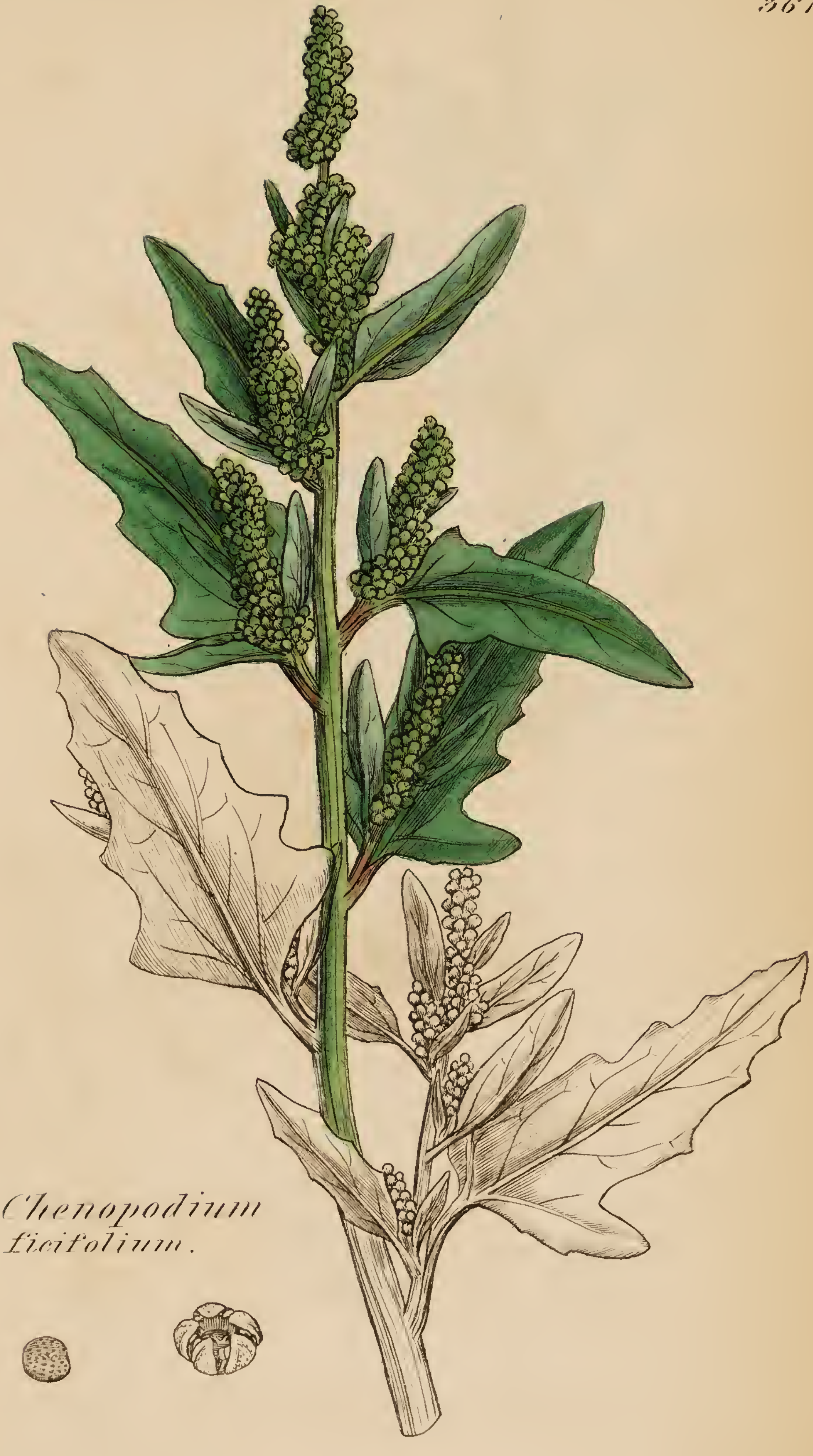
348*



Novr 1.1804. Published by Jas Sowerby, London.

1724

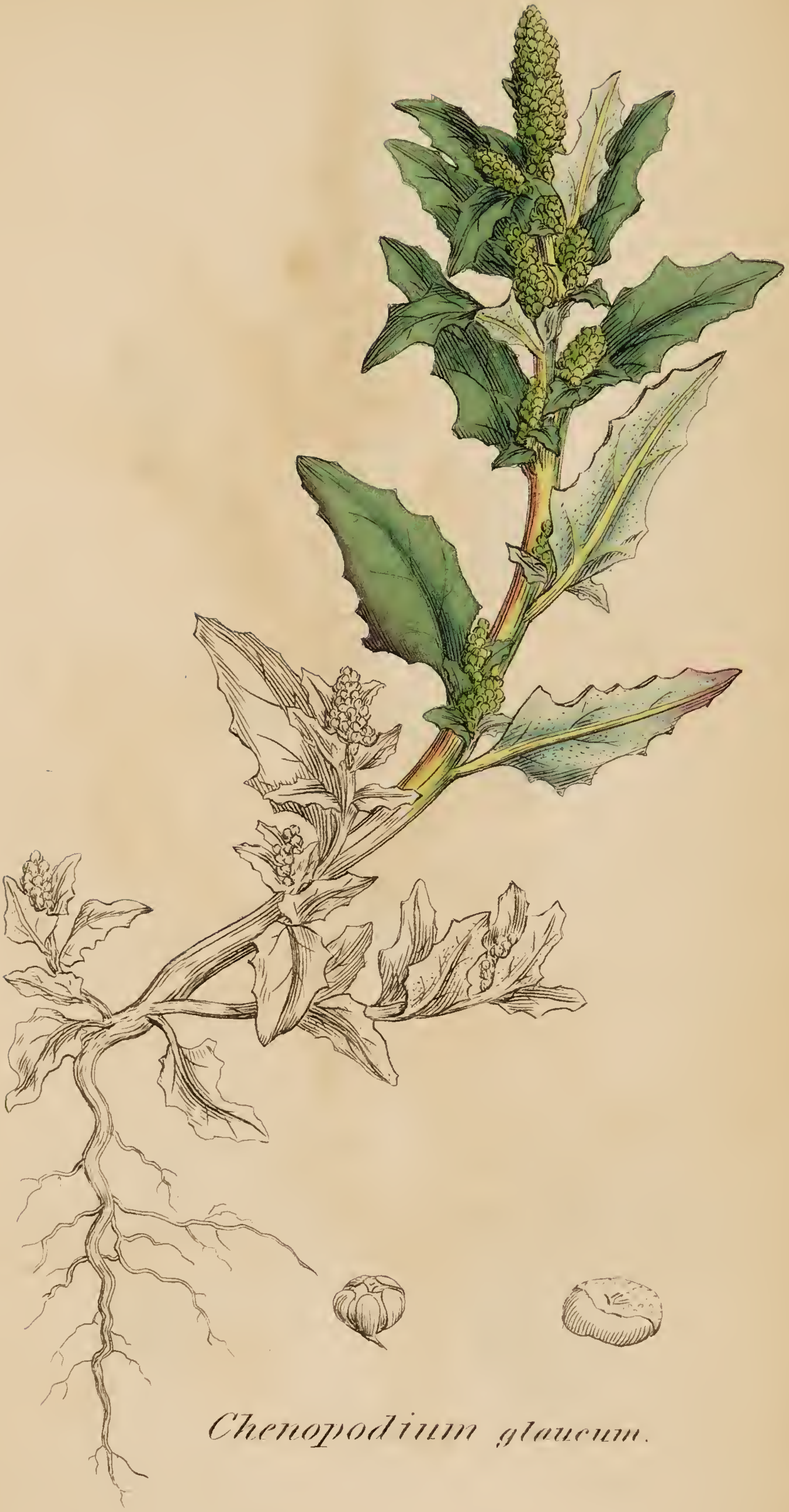
361.



Chenopodium
ficifolium.

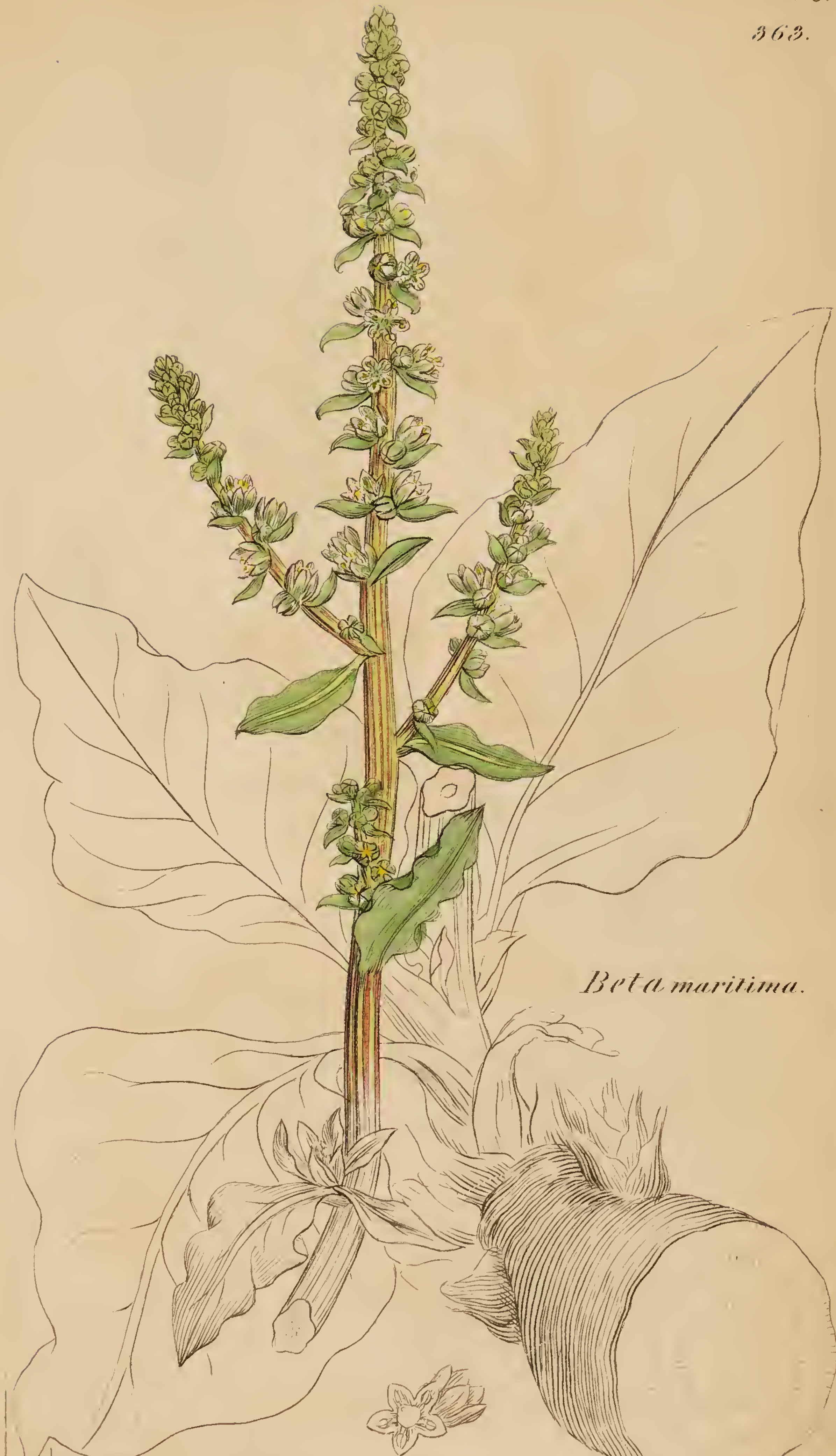
Apr. 1.1807. Publish'd by Jas. Sowerby London.

1454
362.



Chenopodium glaucum.

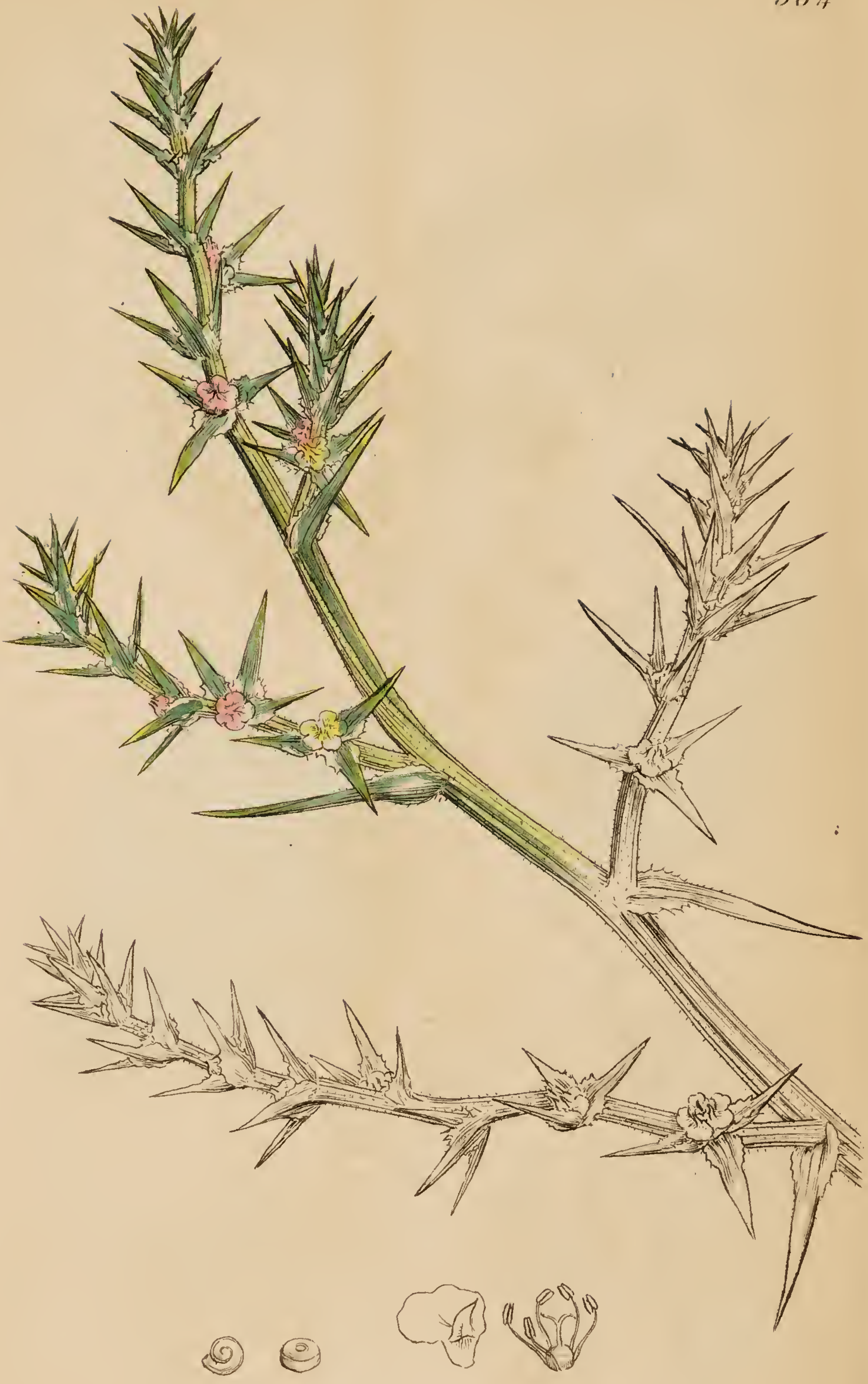
May 1 1805 Publiſhed by Jas Sowerby London.



Beta maritima.

Nov. 1 1795 Publish'd by Js Sowerby London

634
364

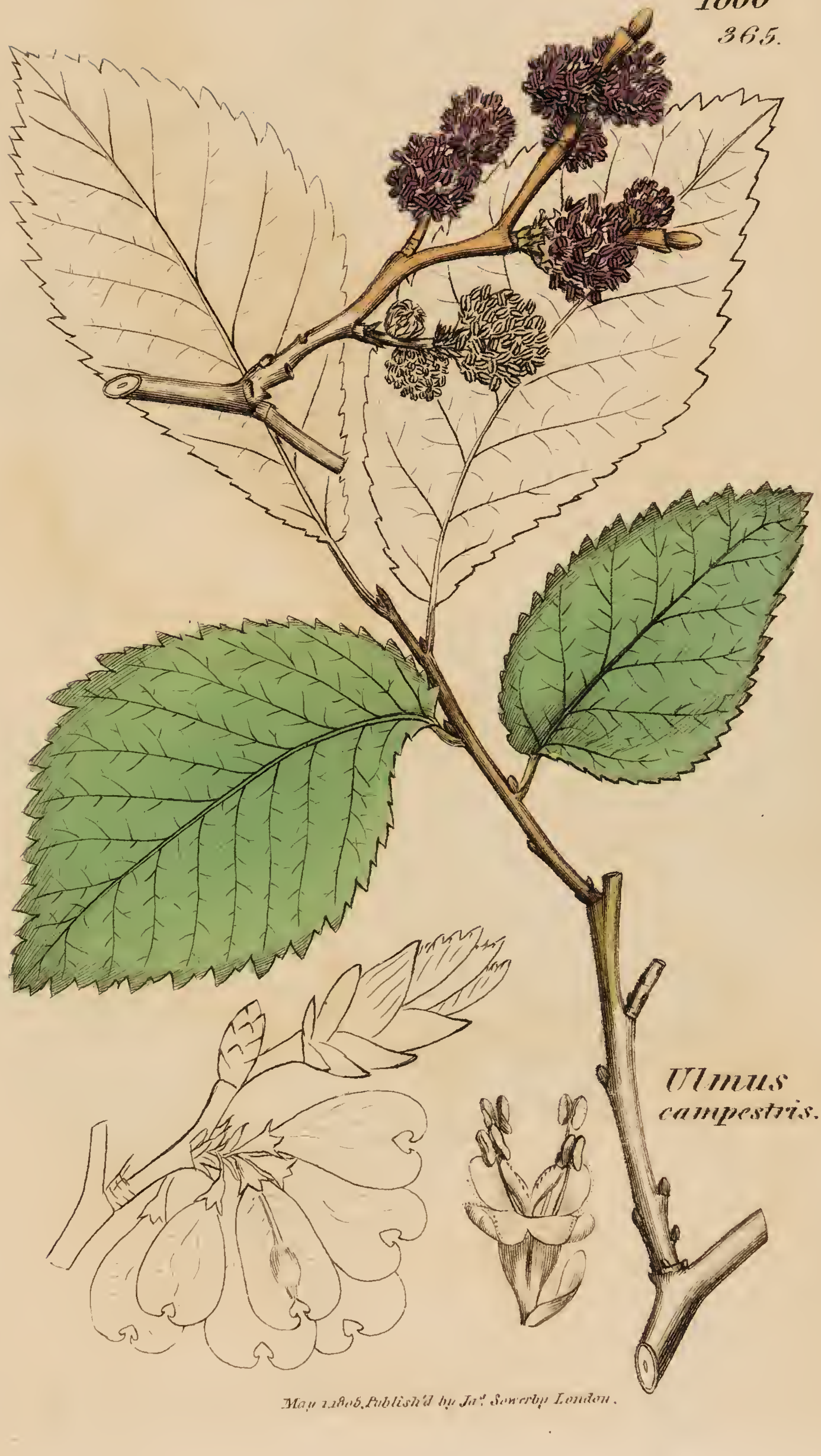


Salsola Kali.

Sep.r 1. 17 [illegible]

1886

365.

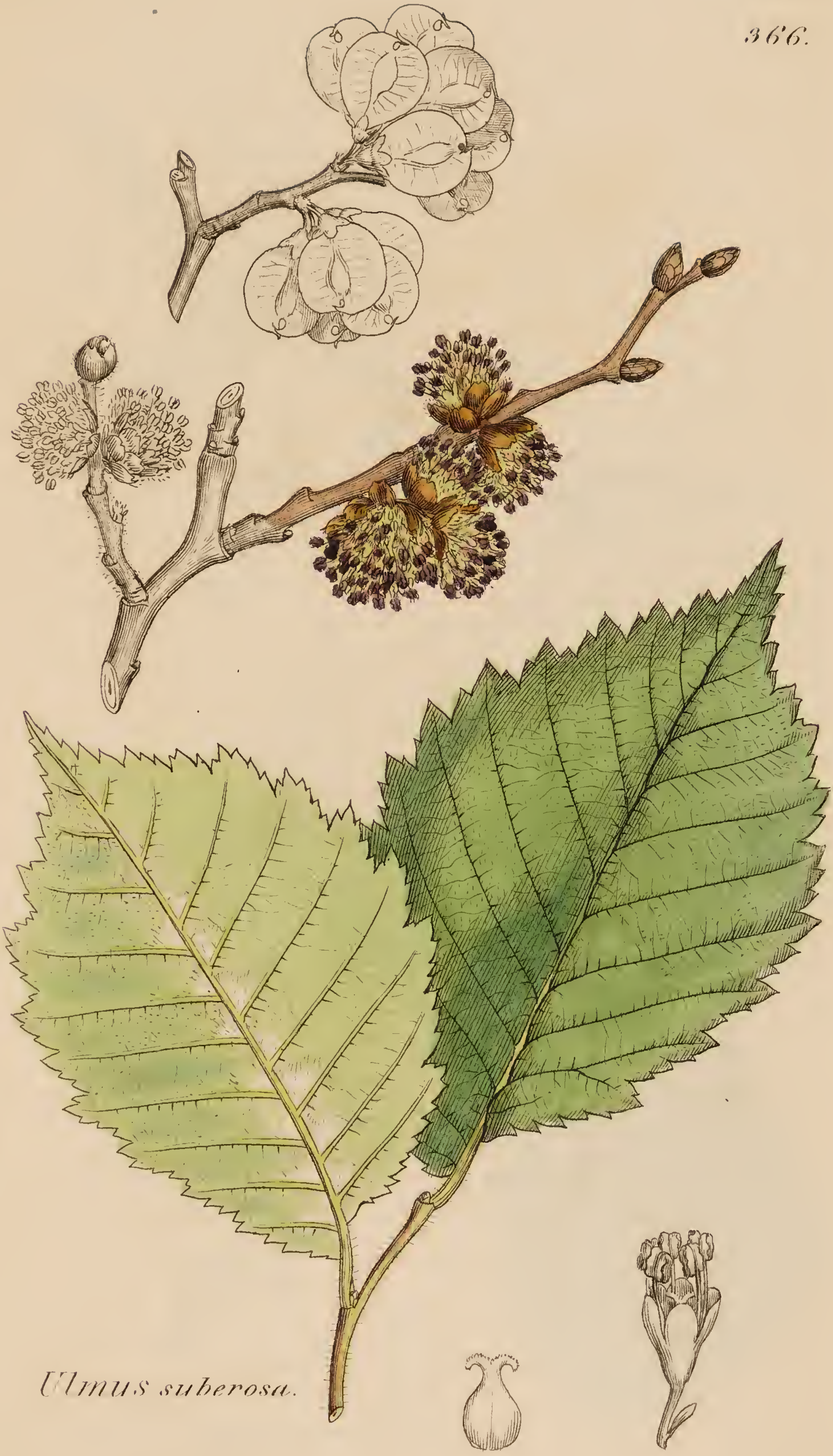


Ulmus campestris.

May 1.1808, Publish'd by Ja^s. Sowerby London.

2161.

366.

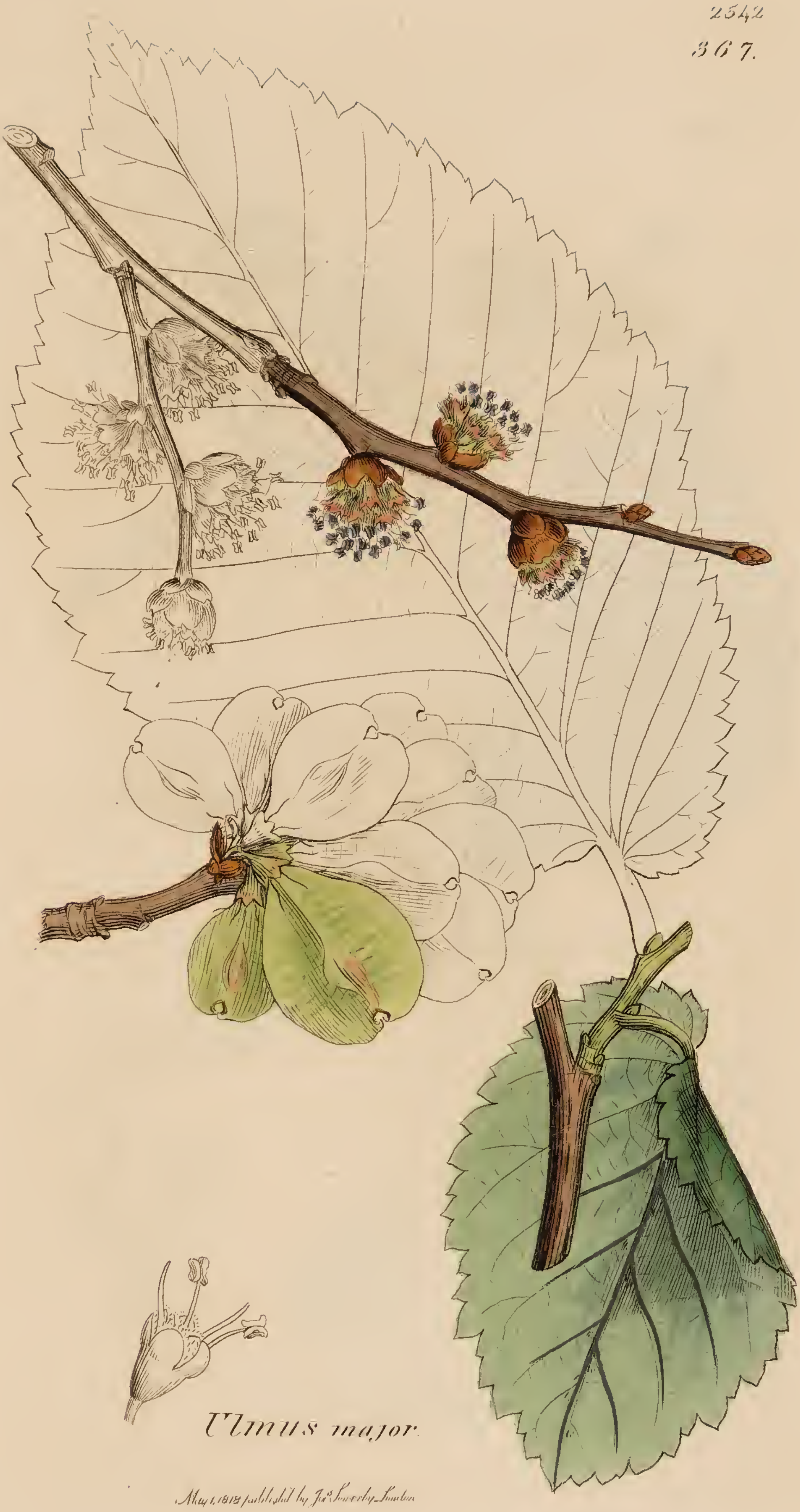


Ulmus suberosa.

June 1 1810 published by Ja^{s}. Sowerby London.

2542

367.

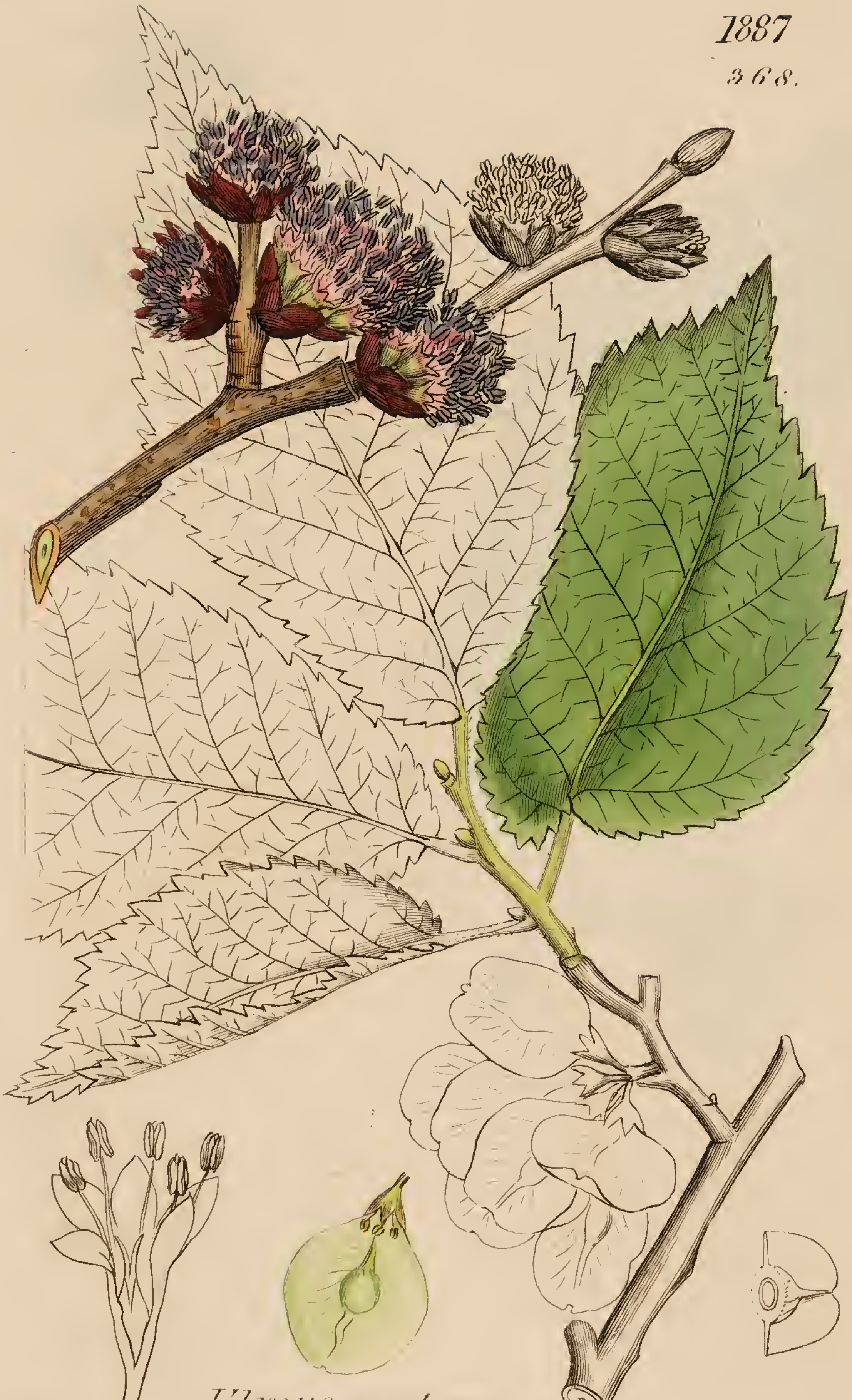


Ulmus major.

May 1, 1812 published by Jas Sowerby London

1887

368.

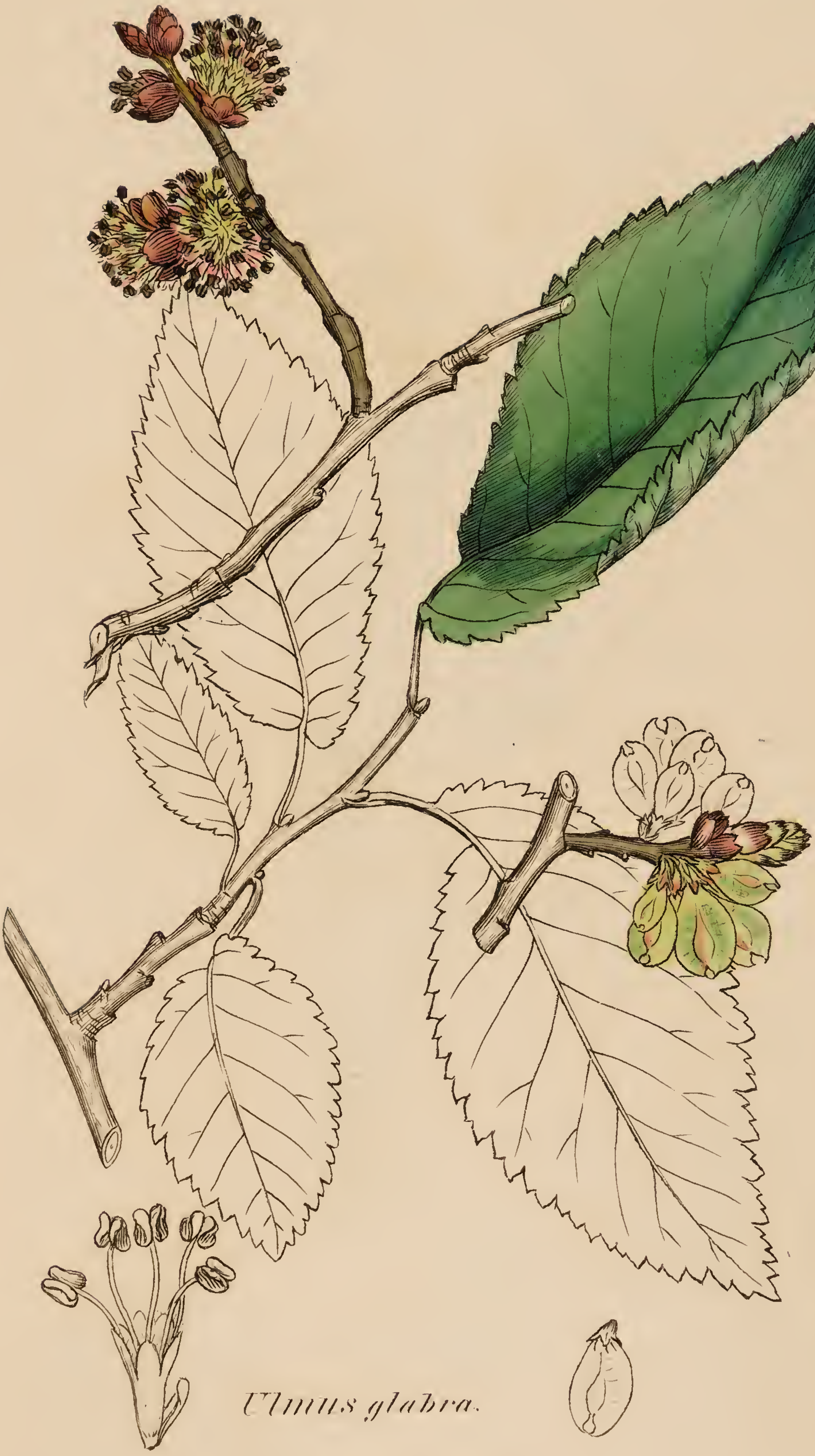


Ulmus montana.

May 1.1808, Publish'd by Jas. Sowerby London.

2248

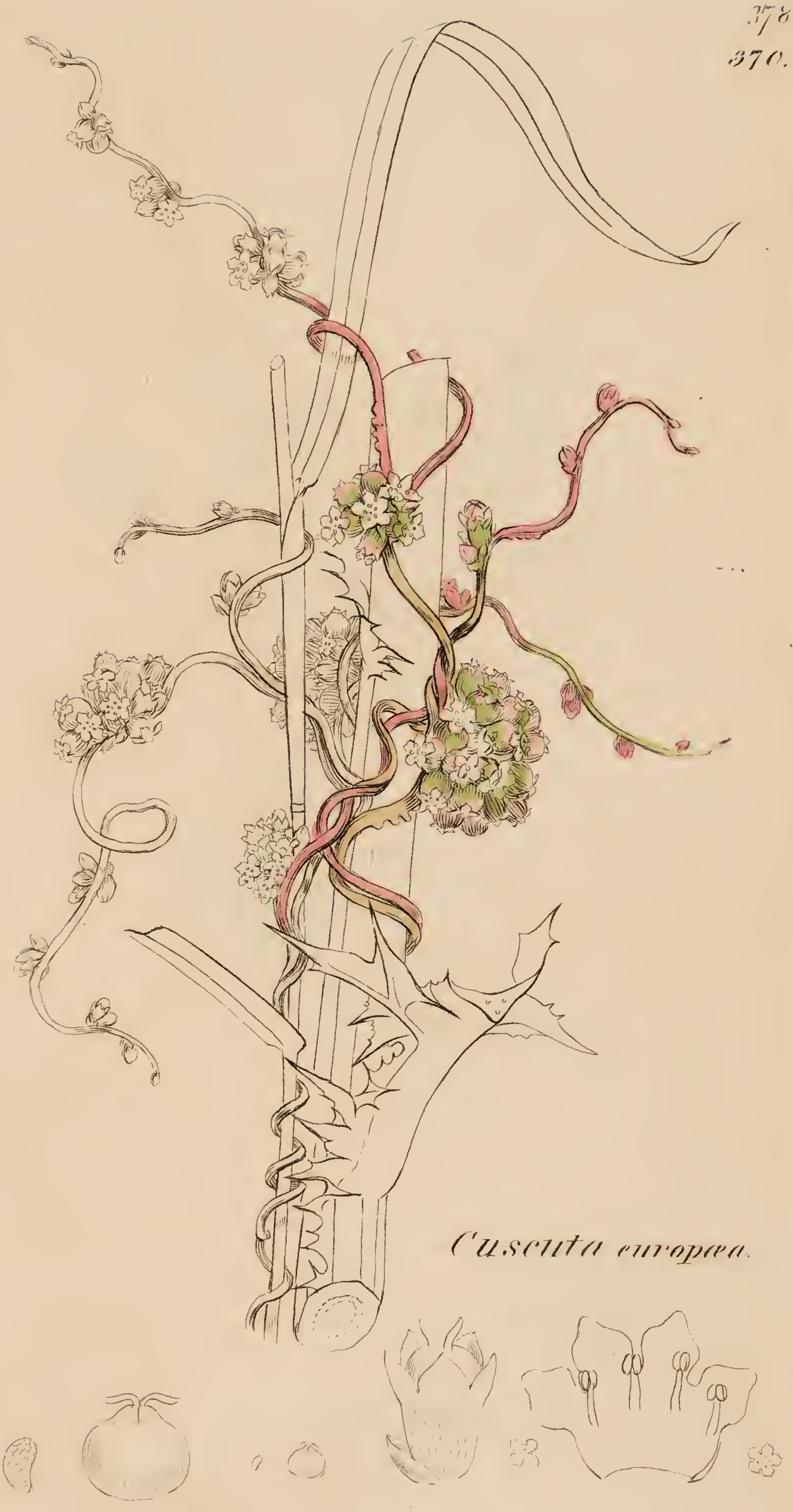
369.



Ulmus glabra.

Feb. 1 1811 published by Jas. Sowerby London.

378.
370.

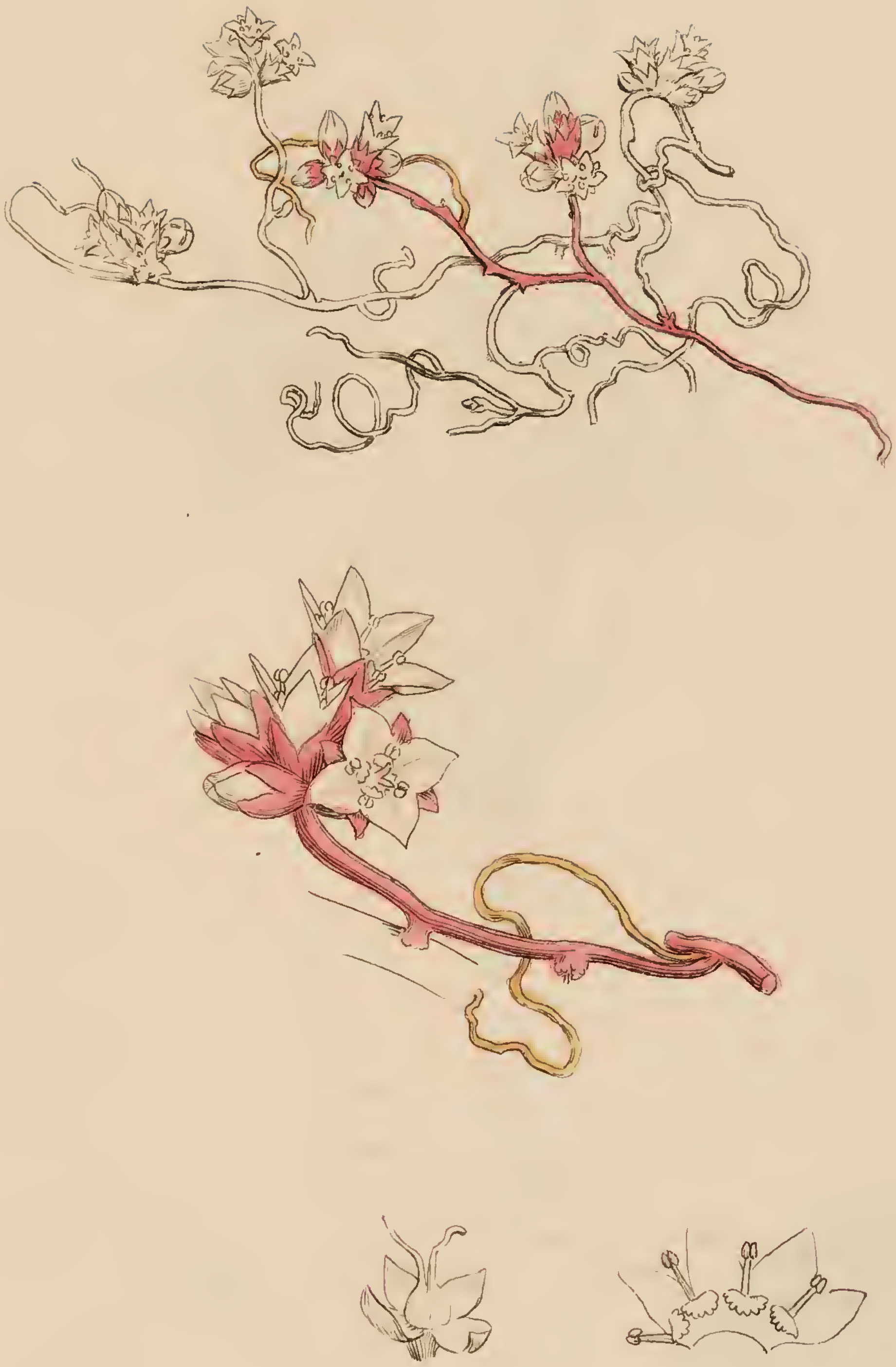


Cuscuta europæa.

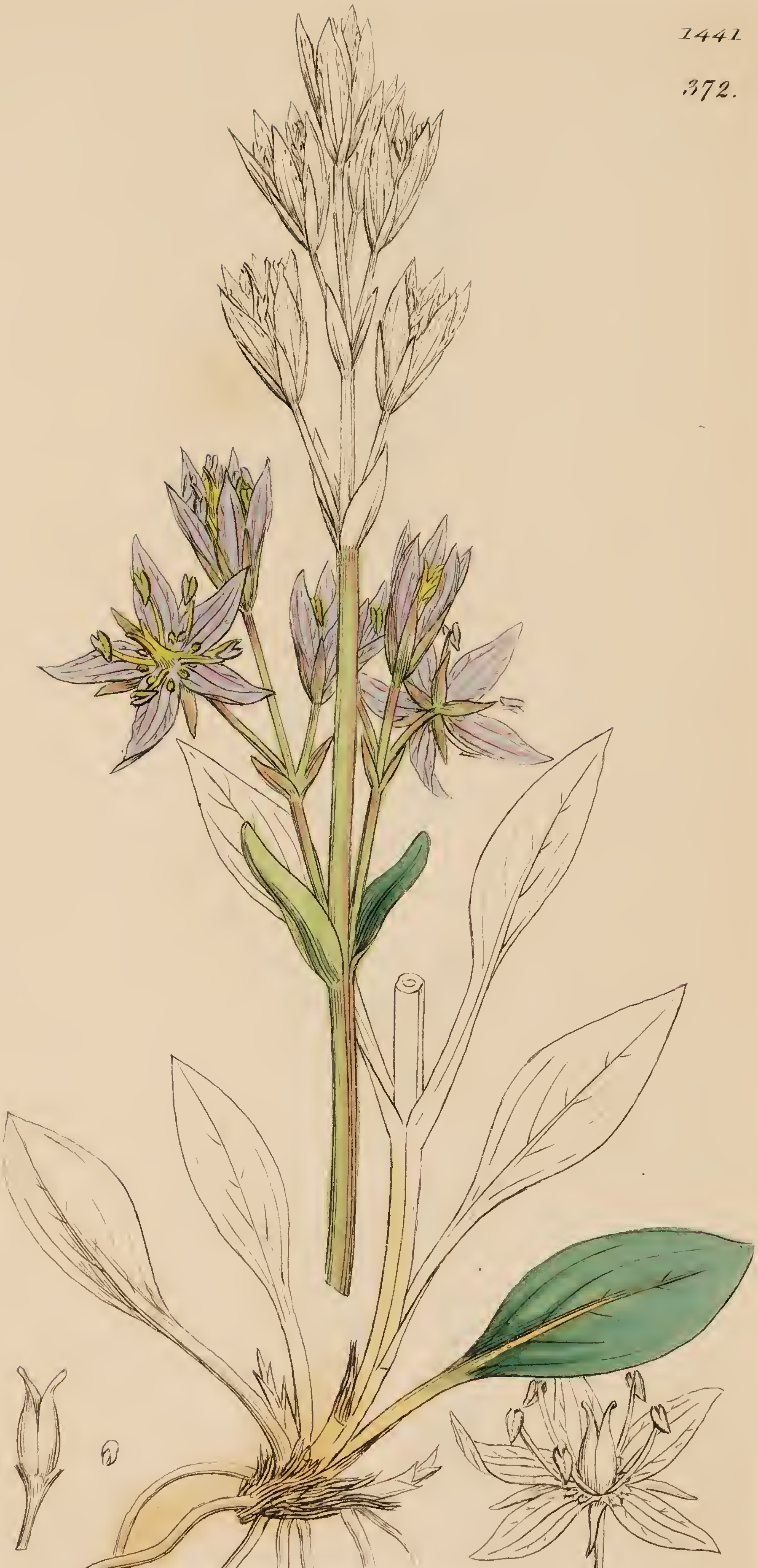
1.1797 Published by J. Sowerby Lond.

55.

371.

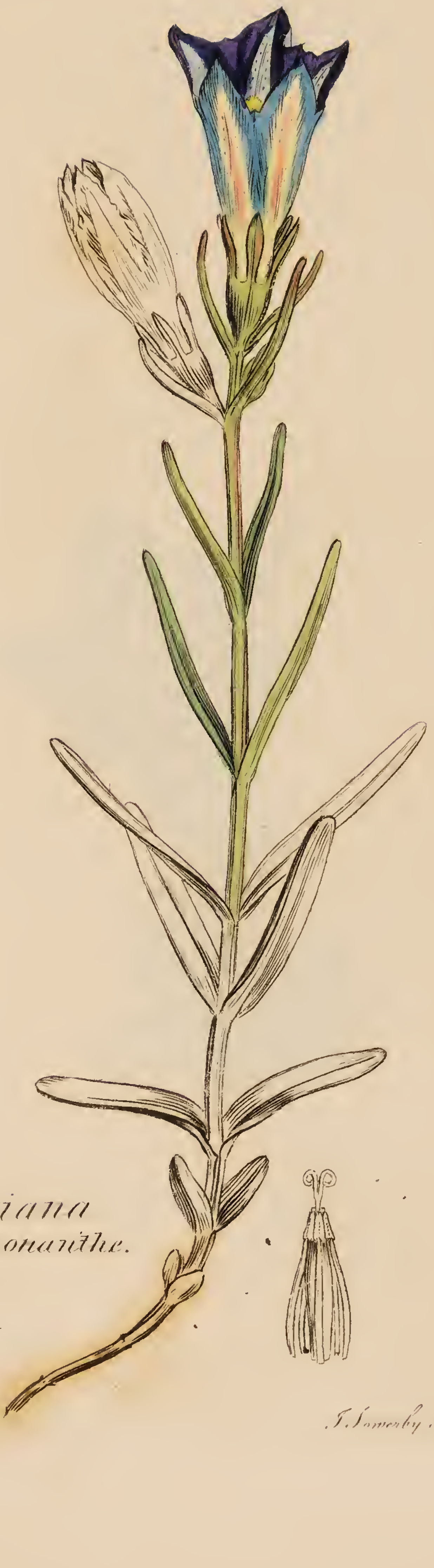


Cuscuta Epithymum.



Swertia perennis.

April 1. 1805. Publiſhed by Jas. Sowerby, London.

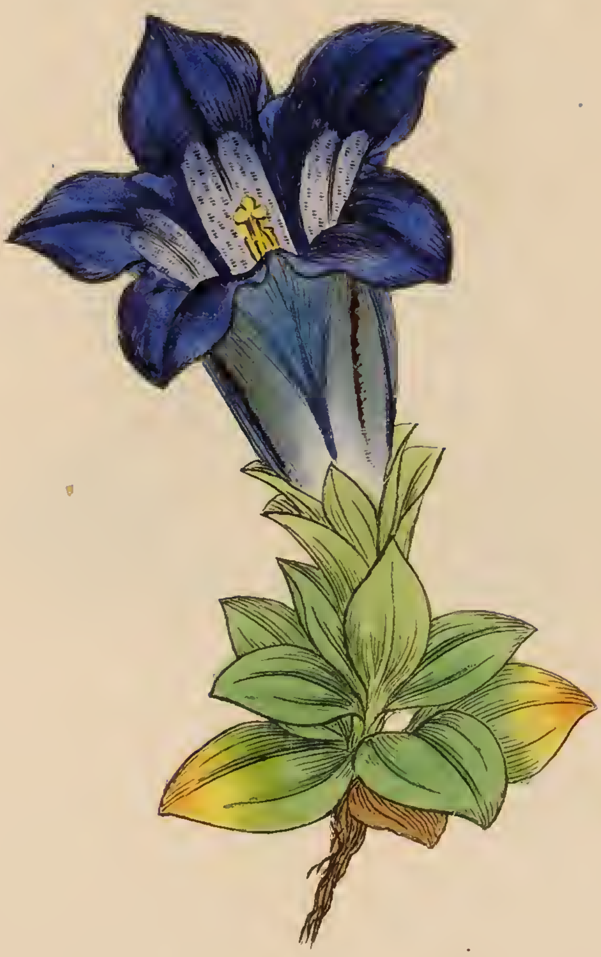


Gentiana
Pneumonanthe.

J. Sowerby [illegible] 1791

1594

374.

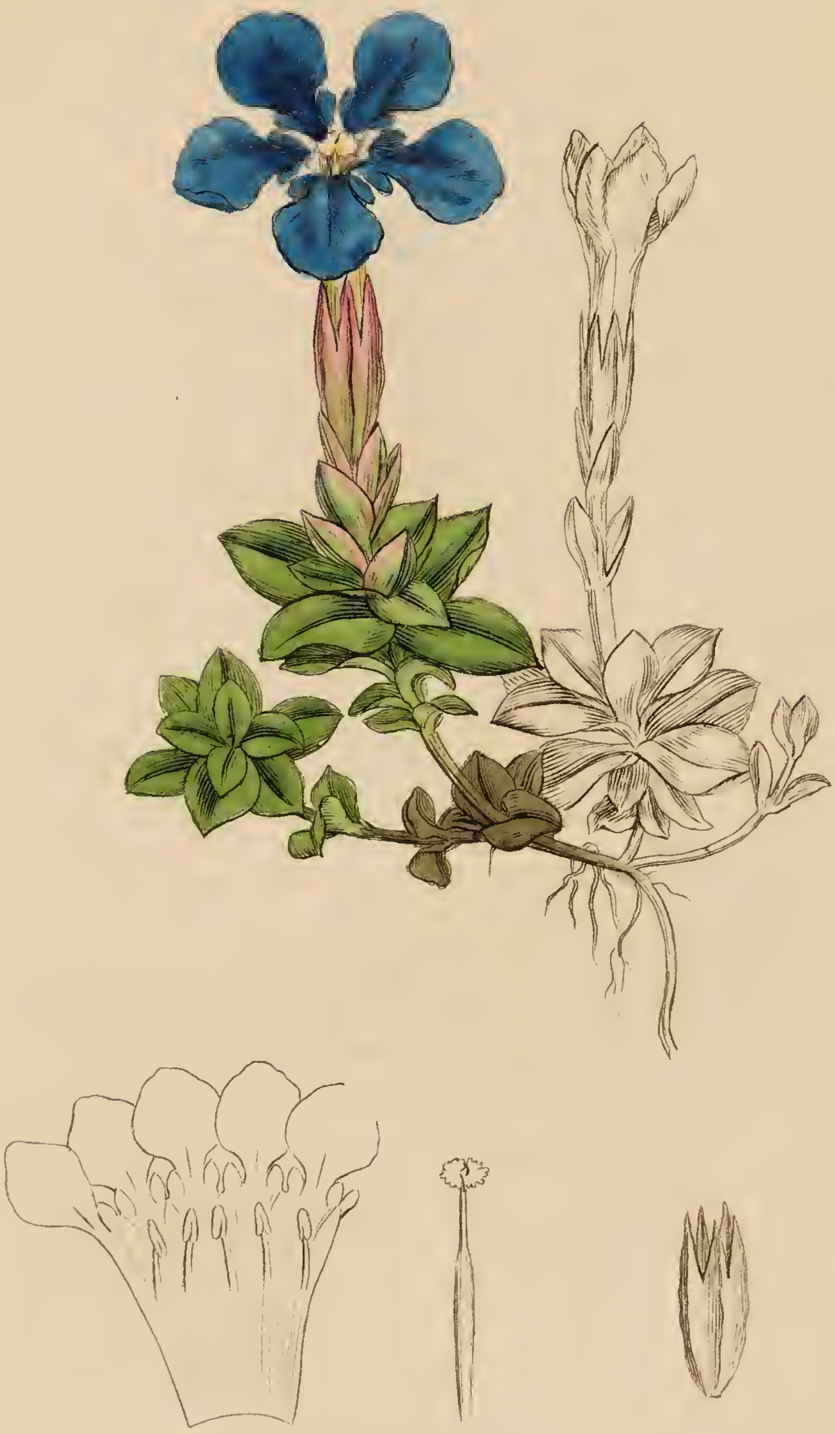


Gentiana acaulis.

[illegible] Publiſhed by Jas. Sowerby London

493.

375.

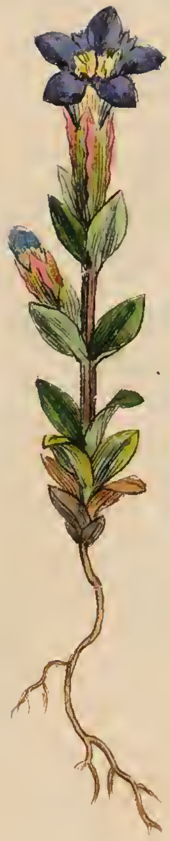


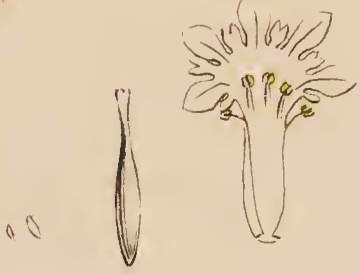
Gentiana verna.

[illegible] 798 Published by Sowerby London

896

376.

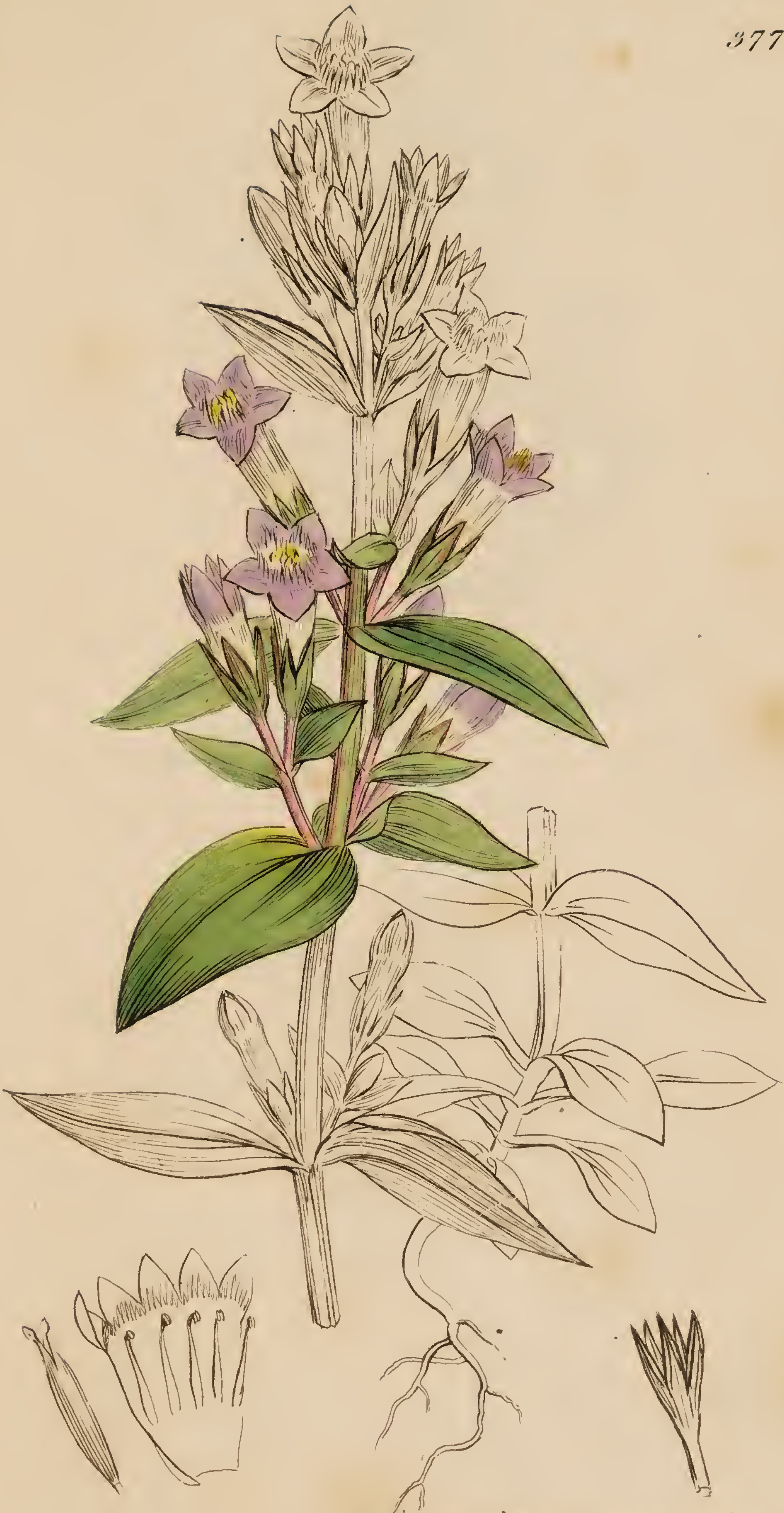




Gentiana nivalis.

July 1. 1801 Published by Jas. Sowerby. London.

377.

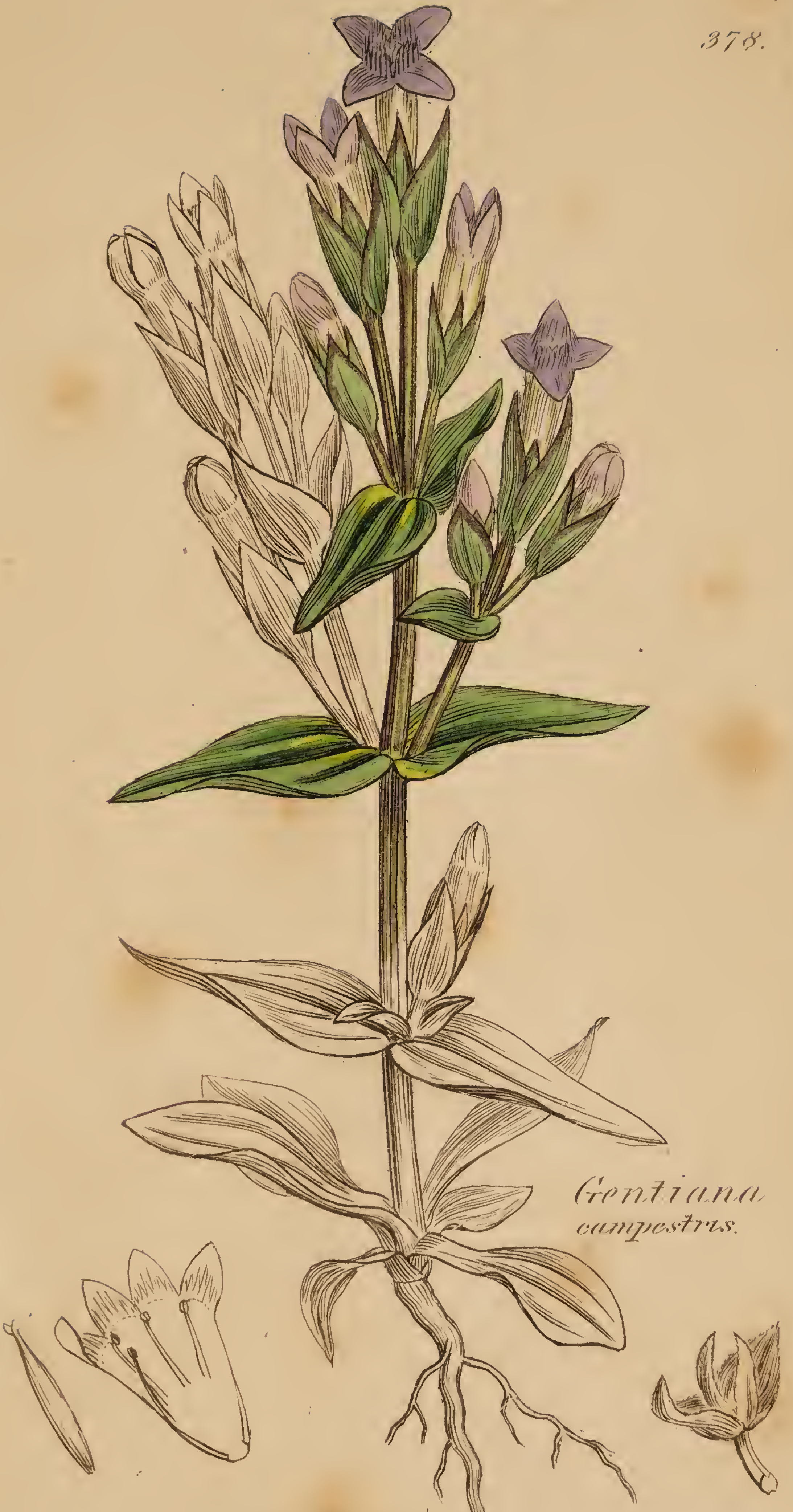


Gentiana Amarella.

[illegible] 1795

257

378.



Gentiana
campestris.

Published by Jas Sowerby delt March 1. 1795